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<110> Bejanin, Stephane
Tanaka, Hiroaki

<120> CYTOGRAM POLYPEPTIDES AND USES THEREOF

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<140> US 09/978,418

<141> 2001-10-15

<150> US 60/311,305

<151> 2001-08-10

<150> US 60/314,734

<151> 2001-08-24

<150> US 60/318,204

<151> 2001-09-07

<150> US 60/326,470

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Val Ile Ser Cys Ala Lys Asp Gly Val Lys Phe Ser Ala Ser Gly Glu
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Leu Gly Asn Gly Asn Ile Lys Leu Ser Gln Thr Ser Asn Val Asp Lys
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Phe Ala Leu Arg Tyr Leu Asn Phe Phe Thr Lys Ala Thr Pro Leu Ser
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Ser Thr Val Thr Leu Ser Met Ser Ala Asp Val Pro Leu Val Val Glu
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Tyr Lys Ile Ala Asp Met Gly His Leu Lys Tyr Tyr Leu Ala Pro Lys
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Ile Glu Asp Glu Glu Gly Ser
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Asn Val Asp Lys Glu Glu Glu Ala Val Thr Ile Glu Met Asn Glu Pro
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Val Gln Leu Thr Phe Ala Leu Arg Tyr Leu Asn Phe Phe Thr Lys Ala
65                               70                               75                               80
Thr Pro Leu Ser Ser Thr Val Thr Leu Ser Met Ser Ala Asp Val Pro
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 1 5
 acc tta aat att aaa act cgg aaa cca gct ctc gtc tcc gtt ggc tct 162
 Thr Leu Asn Ile Lys Thr Arg Lys Pro Ala Leu Val Ser Val Gly Ser
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 Ala Ser Ser Ser Trp Trp Arg Val Met Ala Leu Ile Leu Leu Ile Leu
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 Cys Val Gly Met Val Val Gly Leu Val Ala Leu Gly Ile Trp Ser Val
 45 50 55
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 ctg caa caa tta gca aag cgc ttc tgt caa tat gtg gta aaa caa tca 354
 Leu Gln Gln Leu Ala Lys Arg Phe Cys Gln Tyr Val Val Lys Gln Ser
 75 80 85
 gaa cta aag ggc act ttc aaa ggt cat aaa tgc agc ccc tgt gac aca 402
 Glu Leu Lys Gly Thr Phe Lys Gly His Lys Cys Ser Pro Cys Asp Thr
 90 95 100
 aac tgg aga tat tat gga gat agc tgc tat ggg ttc ttc agg cac aac 450
 Asn Trp Arg Tyr Tyr Gly Asp Ser Cys Tyr Gly Phe Phe Arg His Asn
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act cat tta att cgt tgg gtc gga tta tct cgc cag aag tcg aat gag 594
Thr His Leu Ile Arg Trp Val Gly Leu Ser Arg Gln Lys Ser Asn Glu
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gtc tgg aag tgg gag gat ggc tcg gtt atc tca gaa aat atg ttt gag 642
Val Trp Lys Trp Glu Asp Gly Ser Val Ile Ser Glu Asn Met Phe Glu
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ttt ttg gaa gat gga aaa gga aat atg aat tgt gct tat ttt cat aat 690
Phe Leu Glu Asp Gly Lys Gly Asn Met Asn Cys Ala Tyr Phe His Asn
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ggg aaa atg cac cct acc ttc tgt gag aac aaa cat tat tta atg tgt 738
Gly Lys Met His Pro Thr Phe Cys Glu Asn Lys His Tyr Leu Met Cys
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Glu Arg Lys Ala Gly Met Thr Lys Val Asp Gln Leu Pro
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      35      40      45
Val Ala Leu Gly Ile Trp Ser Val Met Gln Arg Asn Tyr Leu Gln Asp
      50      55      60
Glu Asn Glu Asn Arg Thr Gly Thr Leu Gln Gln Leu Ala Lys Arg Phe
65      70      75      80
Cys Gln Tyr Val Val Lys Gln Ser Glu Leu Lys Gly Thr Phe Lys Gly
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His Lys Cys Ser Pro Cys Asp Thr Asn Trp Arg Tyr Tyr Gly Asp Ser
      100      105      110
Cys Tyr Gly Phe Phe Arg His Asn Leu Thr Trp Glu Glu Ser Lys Gln
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aacacaccaa ggaaaattaa tataggaaaa atttaaaaag ttattagagg actgaaaata 180
taaaaatgga acactgaaag acacagagtt tttattttca gcactgcagc tctg atg 237
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Cys Thr Leu Asn Ser Ser Glu Gly Gly Ala Arg Pro Ala Val Pro His
20 25 30
acc ttg ttc tct tct gct cta gac aga tgg ctc cat aat gac agc ttc 381
Thr Leu Phe Ser Ser Ala Leu Asp Arg Trp Leu His Asn Asp Ser Phe
35 40 45
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Ile Met Ala Val Gly Glu Pro Leu Val His Ile Arg Val Thr Leu Leu
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ctg ctc tgg ttt gga atg ttt ttg tct att tct ggc cac tct cag gcc 477
Leu Leu Trp Phe Gly Met Phe Leu Ser Ile Ser Gly His Ser Gln Ala
70 75 80
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Arg Pro Ser Gln Tyr Phe Thr Ser Pro Glu Val Val Ile Pro Leu Lys
85 90 95
gtg atc agc agg ggc aga ggt gca aag gct cct gga tgg ctc tcc tat 573
Val Ile Ser Arg Gly Arg Gly Ala Lys Ala Pro Gly Trp Leu Ser Tyr
100 105 110
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Ser Leu Arg Phe Gly Gly Gln Arg Tyr Ile Val His Met Arg Val Asn
115 120 125
aag ctg ttg ttt gct gca cac ctt cct gtg ttc acc tac aca gag cag 669
Lys Leu Leu Phe Ala Ala His Leu Pro Val Phe Thr Tyr Thr Glu Gln
130 135 140 145

cat gcc ctg ctc cag gat cag ccc ttc atc cag gat gac tgc tac tac	717
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His Gly Tyr Val Glu Gly Val Pro Glu Ser Leu Val Ala Leu Ser Thr	
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Cys Ser Gly Gly Phe Leu Gly Met Leu Gln Ile Asn Asp Leu Val Tyr	
180 185 190	
gaa atc aag cca att agt gtt tct gcc aca ttt gaa cac cta gta tat	861
Glu Ile Lys Pro Ile Ser Val Ser Ala Thr Phe Glu His Leu Val Tyr	
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325 330 335	
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390 395 400	
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Glu	Glu	Gly	Glu	Glu	Cys	Asp	Cys	Gly	Thr	Ile	Arg	Gln	Cys	Ala	Lys	
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Leu	Cys	Arg	Gln	Gln	Val	Gly	Glu	Cys	Asp	Leu	Pro	Glu	Trp	Cys	Asn	
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Cys	Asn	Met	Arg	Gly	Ile	Cys	Asn	Asn	Lys	Gln	His	Cys	His	Cys	Asn	
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gct ttt tta tta ttt tgc tta cat gtg ctt ttt aag aaa cgc aca aaa 2541
Ala Phe Leu Leu Phe Cys Leu His Val Leu Phe Lys Lys Arg Thr Lys
          755          760          765
agt aaa gaa gat gaa gaa gga taagagaaat gggaaaaaga aggagactaa 2592
Ser Lys Glu Asp Glu Glu Gly
770          775
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His Thr Leu Phe Ser Ser Ala Leu Asp Arg Trp Leu His Asn Asp Ser
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Tyr Ser Leu Arg Phe Gly Gly Gln Arg Tyr Ile Val His Met Arg Val
          115          120          125
Asn Lys Leu Leu Phe Ala Ala His Leu Pro Val Phe Thr Tyr Thr Glu
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Gln His Ala Leu Leu Gln Asp Gln Pro Phe Ile Gln Asp Asp Cys Tyr
145          150          155          160
Tyr His Gly Tyr Val Glu Gly Val Pro Glu Ser Leu Val Ala Leu Ser
          165          170          175
Thr Cys Ser Gly Gly Phe Leu Gly Met Leu Gln Ile Asn Asp Leu Val
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	260	265
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	275	280
Asn Ile Val Asp Ser Phe Tyr His Pro Leu Glu Val Asp Val Ile Leu		285
290	295	300
Thr Gly Ile Asp Ile Trp Thr Ala Ser Asn Pro Leu Pro Thr Ser Gly		
305	310	315
Asp Leu Asp Asn Val Leu Glu Asp Phe Ser Ile Trp Lys Asn Tyr Asn		320
	325	330
Leu Asn Asn Arg Leu Gln His Asp Val Ala His Leu Phe Ile Lys Asp		335
	340	345
Thr Gln Gly Met Lys Leu Gly Val Ala Tyr Val Lys Gly Ile Cys Gln		350
	355	360
Asn Pro Phe Asn Thr Gly Val Asp Val Phe Glu Asp Asn Arg Leu Val		365
370	375	380
Val Phe Ala Ile Thr Leu Gly His Glu Leu Gly His Asn Leu Gly Met		
385	390	395
Gln His Asp Thr Gln Trp Cys Val Cys Glu Leu Gln Trp Cys Ile Met		400
	405	410
His Ala Tyr Arg Lys Val Thr Thr Lys Phe Ser Asn Cys Ser Tyr Ala		415
	420	425
Gln Tyr Trp Asp Ser Thr Ile Ser Ser Gly Leu Cys Ile Gln Pro Pro		430
	435	440
Pro Tyr Pro Gly Asn Ile Phe Arg Leu Lys Tyr Cys Gly Asn Leu Val		445
450	455	460
Val Glu Glu Gly Glu Glu Cys Asp Cys Gly Thr Ile Arg Gln Cys Ala		
465	470	475
Lys Asp Pro Cys Cys Leu Leu Asn Cys Thr Leu His Pro Gly Ala Ala		480
	485	490
Cys Ala Phe Gly Ile Cys Cys Lys Asp Cys Lys Phe Leu Pro Ser Gly		495
	500	505
Thr Leu Cys Arg Gln Gln Val Gly Glu Cys Asp Leu Pro Glu Trp Cys		510
	515	520
Asn Gly Thr Ser His Gln Cys Pro Asp Asp Val Tyr Val Gln Asp Gly		525
530	535	540
Ile Ser Cys Asn Val Asn Ala Phe Cys Tyr Glu Lys Thr Cys Asn Asn		
545	550	555
His Asp Ile Gln Cys Lys Glu Ile Phe Gly Gln Asp Ala Arg Ser Ala		560
	565	570
Ser Gln Ser Cys Tyr Gln Glu Ile Asn Thr Gln Gly Asn Arg Phe Gly		575
	580	585
His Cys Gly Ile Val Gly Thr Thr Tyr Val Lys Cys Trp Thr Pro Asp		590
	595	600
Ile Met Cys Gly Arg Val Gln Cys Glu Asn Val Gly Val Ile Pro Asn		605
610	615	620
Leu Ile Glu His Ser Thr Val Gln Gln Phe His Leu Asn Asp Thr Thr		
625	630	635
Cys Trp Gly Thr Asp Tyr His Leu Gly Met Ala Ile Pro Asp Ile Gly		640
	645	650
		655

Glu Val Lys Asp Gly Thr Val Cys Gly Pro Glu Lys Ile Cys Ile Arg
 660 665 670
 Lys Lys Cys Ala Ser Met Val His Leu Ser Gln Ala Cys Gln Pro Lys
 675 680 685
 Thr Cys Asn Met Arg Gly Ile Cys Asn Asn Lys Gln His Cys His Cys
 690 695 700
 Asn His Glu Trp Ala Pro Pro Tyr Cys Lys Asp Lys Gly Tyr Gly Gly
 705 710 715 720
 Ser Ala Asp Ser Gly Pro Pro Pro Lys Asn Asn Met Glu Gly Leu Asn
 725 730 735
 Val Met Gly Lys Leu Arg Tyr Leu Ser Leu Leu Cys Leu Leu Pro Leu
 740 745 750
 Val Ala Phe Leu Leu Phe Cys Leu His Val Leu Phe Lys Lys Arg Thr
 755 760 765
 Lys Ser Lys Glu Asp Glu Glu Gly
 770 775

<210> 7
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 <212> DNA
 <213> Homo sapiens

<220>
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 <222> 1..263

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 <222> 264..926

<220>
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 <222> 927..1436

<220>
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 <222> 1404..1409

<220>
 <221> polyA_site
 <222> 1421..1436

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 ccagccaggc tacagggatc gattggagct gtccttgggg ctgtaattgg ccccagctga 120
 gcagggcaaa cactgagggtc aactacaagc cacaggcccc ttccccagcc tcagttcaca 180
 gctgccctgt tgcagggagg cggtggccct tctgttgcta gaccgagcct gtgggatata 240
 ccaaggcaga ggagcccata gcc atg agg agc ctc ggg gcc ctg ctc ttg ctg 293
 Met Arg Ser Leu Gly Ala Leu Leu Leu Leu
 -15 -10
 ctg agc gcc tgc ctg gcg gtg agc gct ggc cct gtg cca acg ccg ccc 341
 Leu Ser Ala Cys Leu Ala Val Ser Ala Gly Pro Val Pro Thr Pro Pro
 -5 1 5
 gac aac atc caa gtg cag gaa aac ttc aat atc tct cgg atc tat ggg 389
 Asp Asn Ile Gln Val Gln Glu Asn Phe Asn Ile Ser Arg Ile Tyr Gly

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      10      15      20
aag tgg tac aac ctg gcc atc ggt tcc acc tgc ccc tgg ctg aag aag 437
Lys Trp Tyr Asn Leu Ala Ile Gly Ser Thr Cys Pro Trp Leu Lys Lys
      25      30      35
atc atg gac agg atg aca gtg agc acg ctg gtg ctg gga gag ggc gct 485
Ile Met Asp Arg Met Thr Val Ser Thr Leu Val Leu Gly Glu Gly Ala
      40      45      50      55
aca gag gcg gag atc agc atg acc agc act cgt tgg cgg aaa ggt gtc 533
Thr Glu Ala Glu Ile Ser Met Thr Ser Thr Arg Trp Arg Lys Gly Val
      60      65      70
tgt gag gag acg tct gga gct tat gag aaa aca gat act gat ggg aag 581
Cys Glu Glu Thr Ser Gly Ala Tyr Glu Lys Thr Asp Thr Asp Gly Lys
      75      80      85
ttt ctc tat cac aaa tcc aaa tgg aac ata acc atg gag tcc tat gtg 629
Phe Leu Tyr His Lys Ser Lys Trp Asn Ile Thr Met Glu Ser Tyr Val
      90      95      100
gtc cac acc aac tat gat gag tat gcc att ttc ctg acc aag aaa ttc 677
Val His Thr Asn Tyr Asp Glu Tyr Ala Ile Phe Leu Thr Lys Lys Phe
      105      110      115
agc cgc cat cat gga ccc acc att act gcc aag ctc tac ggg cgg gcg 725
Ser Arg His His Gly Pro Thr Ile Thr Ala Lys Leu Tyr Gly Arg Ala
      120      125      130      135
ccg cag ctg agg gaa act ctc ctg cag gac ttc aga gtg gtt gcc cag 773
Pro Gln Leu Arg Glu Thr Leu Leu Gln Asp Phe Arg Val Val Ala Gln
      140      145      150
ggt gtg ggc atc cct gag gac tcc atc ttc acc atg gct gac cga ggt 821
Gly Val Gly Ile Pro Glu Asp Ser Ile Phe Thr Met Ala Asp Arg Gly
      155      160      165
gaa tgt gtc cct ggg gag cag gaa cca gag ccc atc tta atc ccg aga 869
Glu Cys Val Pro Gly Glu Gln Glu Pro Glu Pro Ile Leu Ile Pro Arg
      170      175      180
gtc cgg agg gct gct acc cca aga aga gga agg atc agg ggg tgg gca 917
Val Arg Arg Ala Ala Thr Pro Arg Arg Gly Arg Ile Arg Gly Trp Ala
      185      190      195
act ggt aac tgaagtcacc aagaaagaag attcctgcca gctgggctac 966
Thr Gly Asn
200
tcggccggtc cctgcatggg aatgaccagc aggtatttct ataatggtac atccatggcc 1026
tgtgagactt tccagtacgg cggctgcatg ggcaacggta acaacttcgt cacagaaaag 1086
gagtgtctgc agacctgccg aactgtggcg gcctgcaatc tccccatagt ccggggcccc 1146
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ccctacgggg gctgccaggg caacgggaac aagtttctact cagagaagga gtgcagagag 1266
tactgcggtg tccctggtga tgggtgatgag gagctgctgc gcttctccaa ctgacaactg 1326
gccggtctgc aagtcagagg atggccagtg tctgtcccgg ggctcctgtgg caggcagcgc 1386
caagcaacct ggttccaaat aaaaactaaa ttgcaaaaaa aaaaaaaaaa 1436

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<210> 8

<211> 221

<212> PRT

<213> Homo sapiens

<220>

<221> SIGNAL

<222> 1..19

<400> 8

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Val Ser Ala Gly Pro Val Pro Thr Pro Pro Asp Asn Ile Gln Val Gln
      1      5      10
Glu Asn Phe Asn Ile Ser Arg Ile Tyr Gly Lys Trp Tyr Asn Leu Ala
      15      20      25
Ile Gly Ser Thr Cys Pro Trp Leu Lys Lys Ile Met Asp Arg Met Thr
30      35      40      45
Val Ser Thr Leu Val Leu Gly Glu Gly Ala Thr Glu Ala Glu Ile Ser
      50      55      60
Met Thr Ser Thr Arg Trp Arg Lys Gly Val Cys Glu Glu Thr Ser Gly
      65      70      75
Ala Tyr Glu Lys Thr Asp Thr Asp Gly Lys Phe Leu Tyr His Lys Ser
      80      85      90
Lys Trp Asn Ile Thr Met Glu Ser Tyr Val Val His Thr Asn Tyr Asp
      95      100      105
Glu Tyr Ala Ile Phe Leu Thr Lys Lys Phe Ser Arg His His Gly Pro
110      115      120      125
Thr Ile Thr Ala Lys Leu Tyr Gly Arg Ala Pro Gln Leu Arg Glu Thr
      130      135      140
Leu Leu Gln Asp Phe Arg Val Val Ala Gln Gly Val Gly Ile Pro Glu
      145      150      155
Asp Ser Ile Phe Thr Met Ala Asp Arg Gly Glu Cys Val Pro Gly Glu
      160      165      170
Gln Glu Pro Glu Pro Ile Leu Ile Pro Arg Val Arg Arg Ala Ala Thr
      175      180      185
Pro Arg Arg Gly Arg Ile Arg Gly Trp Ala Thr Gly Asn
190      195      200

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<210> 9

<211> 2132

<212> DNA

<213> Homo sapiens

<220>

<221> 5'UTR

<222> 1..92

<220>

<221> CDS

<222> 93..551

<220>

<221> 3'UTR

<222> 552..2132

<220>

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<222> 2085..2090

<220>

<221> polyA_site

<222> 2117..2132

<400> 9

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gagatgtggt tctgcgcgtg tgcggacggc tgtctgttaa ctccgcggtc agttcccga 60
ctggtggctg gtctgcaggg ttgacctgcg ca atg cag agg ctg cag gta gtg 113
                               Met Gln Arg Leu Gln Val Val
                               -35                               -30
ctg ggc cac ctg agg ggt ccg gcc gat tcc ggc tgg atg ccg cag gcc 161
Leu Gly His Leu Arg Gly Pro Ala Asp Ser Gly Trp Met Pro Gln Ala
                               -25                               -20                               -15
gcg cct tgc ctg agc ggt gcc ccg cag gcc tcg gcc gcg gac gtg gtg 209
Ala Pro Cys Leu Ser Gly Ala Pro Gln Ala Ser Ala Ala Asp Val Val
                               -10                               -5                               1
gtg gtg cac ggg cgg cgc acg gcc atc tgc cgg gcg ggc cgc ggc ggc 257
Val Val His Gly Arg Arg Thr Ala Ile Cys Arg Ala Gly Arg Gly Gly
5                               10                               15                               20
ttc aag gac acc acc ccc gac gag ctt ctg tcg gca gtc atg acc gcg 305
Phe Lys Asp Thr Thr Pro Asp Glu Leu Leu Ser Ala Val Met Thr Ala
                               25                               30                               35
gtt ctg aag gac gtg aat ctg agg ccg gaa cag ctg ggg gac atc tgt 353
Val Leu Lys Asp Val Asn Leu Arg Pro Glu Gln Leu Gly Asp Ile Cys
                               40                               45                               50
gtc gga aat gtg ctg cag cct ggg gcc ggg gca atc atg gcc cga atc 401
Val Gly Asn Val Leu Gln Pro Gly Ala Gly Ala Ile Met Ala Arg Ile
                               55                               60                               65
gcc cag ttt ctg agt gac atc ccg gag act gtg cct ttg tcc act gtc 449
Ala Gln Phe Leu Ser Asp Ile Pro Glu Thr Val Pro Leu Ser Thr Val
                               70                               75                               80
aat aga cag tgt tcg tcg ggg cta cag gca gtg gcc agc ata gca ggg 497
Asn Arg Gln Cys Ser Ser Gly Leu Gln Ala Val Ala Ser Ile Ala Gly
85                               90                               95                               100
tgg agt cca tgt ccc tgg ctg aca gag gga acc ctg gaa ata tta ctt 545
Trp Ser Pro Cys Pro Trp Leu Thr Glu Gly Thr Leu Glu Ile Leu Leu
                               105                               110                               115
cgc gct tgatggagaa ggagaaggcc agagattgcc tgattcctat ggggataacc 601
Arg Ala
tctgagaatg tggctgagcg gtttggcatt tcacgggaga agcaggatac ctttgccttg 661
gcttcccagc agaaggcagc aagagcccag agcaagggct gtttccaagc tgagattgtg 721
cctgtgacca ccacggtcca tgatgacaag ggcaaccaaga ggagcatcac tgtgacctag 781
gatgagggtg tccgccccag caccaccatg gagggccttg ccaaactgaa gcctgccttc 841
aagaaagatg gttctaccac agctgggtgag actggtccgg ggtaggggtg tgagaaagca 901
ggccatggcc atgctgggtg ctgtactctg ggaacctgga atagaccagg cccctctgca 961
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agggcaccca ctgggctgca ctggggcacg acaggtcatc acgctgctca atgagctgaa 1681
gcgccgtggg aagagggcat acggagtggg gtccatgtgc atcgggactg gaatgggagc 1741
cgctgccgtc tttgaatacc ctgggaactg agtgaggtcc caggctggag gcgctacgca 1801
gacagtcttg ctgctctagc agcaaggcag taacaccaca aaagcaaac cacatgggaa 1861

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aactcagcac tgggtggtggt ggcagtggac agatcaaggc acttcaactc atttggaata 1921
tgtgaacact gatgacatgg tataggagtg ggtgggggtg tgagccaccc atcagaccct 1981
cttttagctgt gcaagataaa agcagcctgg gtcacccagg ccacaaggcc atgggttaatt 2041
cttaaggcaa ggcaaatacca tggatgagaa gtgcaatggg catagtaaaa gtgcatgaat 2101
ttatcttaaa aaaagaaaaa aaaaaaaaaa a 2132

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<210> 10
<211> 153
<212> PRT
<213> Homo sapiens

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<220>
<221> SIGNAL
<222> 1..35

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<400> 10
Met Gln Arg Leu Gln Val Val Leu Gly His Leu Arg Gly Pro Ala Asp
-35 -30 -25 -20
Ser Gly Trp Met Pro Gln Ala Ala Pro Cys Leu Ser Gly Ala Pro Gln
-15 -10 -5
Ala Ser Ala Ala Asp Val Val Val Val His Gly Arg Arg Thr Ala Ile
1 5 10
Cys Arg Ala Gly Arg Gly Gly Phe Lys Asp Thr Thr Pro Asp Glu Leu
15 20 25
Leu Ser Ala Val Met Thr Ala Val Leu Lys Asp Val Asn Leu Arg Pro
30 35 40 45
Glu Gln Leu Gly Asp Ile Cys Val Gly Asn Val Leu Gln Pro Gly Ala
50 55 60
Gly Ala Ile Met Ala Arg Ile Ala Gln Phe Leu Ser Asp Ile Pro Glu
65 70 75
Thr Val Pro Leu Ser Thr Val Asn Arg Gln Cys Ser Ser Gly Leu Gln
80 85 90
Ala Val Ala Ser Ile Ala Gly Trp Ser Pro Cys Pro Trp Leu Thr Glu
95 100 105
Gly Thr Leu Glu Ile Leu Leu Arg Ala
110 115

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<210> 11
<211> 2266
<212> DNA
<213> Homo sapiens

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<220>
<221> 5'UTR
<222> 1..200

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<220>
<221> CDS
<222> 201..986

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<220>
<221> 3'UTR
<222> 987..2266

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<220>

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<221> polyA_signal

<222> 2233..2238

<220>

<221> polyA_site

<222> 2251..2266

<400> 11

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aacagagcta gactccgtct caagaagaag aagaaggaga agaaggagaa ggagaagggga    60
aaaaagaatc ctcatacatta atgcaagtgg aaggaaactc ttcaccaaag aattgatcac    120
atcatgaaag gtgaaatcat tacggaattg cttaaataata taatttgaat ctggatttaa    180
aaataataaa tgtgatcagg atg ccc ttc tct cat ctg tct acc tac agc ctg    233
                Met Pro Phe Ser His Leu Ser Thr Tyr Ser Leu
                        -20                                -15
gtt tgg gtc atg gca gca gtg gtg ctg tgc aca gca caa gtg caa gtg    281
Val Trp Val Met Ala Ala Val Val Leu Cys Thr Ala Gln Val Gln Val
                -10                                -5                                1
gtg acc cag gat gaa aga gag cag ctg tac aca act gct tcc tta aaa    329
Val Thr Gln Asp Glu Arg Glu Gln Leu Tyr Thr Thr Ala Ser Leu Lys
5                                10                                15                                20
tgc tct ctg caa aat gcc cag gaa gcc ctc att gtg aca tgg cag aaa    377
Cys Ser Leu Gln Asn Ala Gln Glu Ala Leu Ile Val Thr Trp Gln Lys
                25                                30                                35
aag aaa gct gta agc cca gaa aac atg gtc acc ttc agc gag aac cat    425
Lys Lys Ala Val Ser Pro Glu Asn Met Val Thr Phe Ser Glu Asn His
                40                                45                                50
ggg gtg gtg atc cag cct gcc tat aag gac aag ata aac att acc cag    473
Gly Val Val Ile Gln Pro Ala Tyr Lys Asp Lys Ile Asn Ile Thr Gln
                55                                60                                65
ctg gga ctc caa aac tca acc atc acc ttc tgg aat atc acc ctg gag    521
Leu Gly Leu Gln Asn Ser Thr Ile Thr Phe Trp Asn Ile Thr Leu Glu
                70                                75                                80
gat gaa ggg tgt tac atg tgt ctc ttc aat acc ttt ggt ttt ggg aag    569
Asp Glu Gly Cys Tyr Met Cys Leu Phe Asn Thr Phe Gly Phe Gly Lys
85                                90                                95                                100
atc tca gga acg gcc tgc ctc acc gtc tat gta cag ccc ata gta tcc    617
Ile Ser Gly Thr Ala Cys Leu Thr Val Tyr Val Gln Pro Ile Val Ser
                105                                110                                115
ctt cac tac aaa ttc tct gaa gac cac cta aat atc act tgc tct gcc    665
Leu His Tyr Lys Phe Ser Glu Asp His Leu Asn Ile Thr Cys Ser Ala
                120                                125                                130
act gcc cgc cca gcc ccc atg gtc ttc tgg aag gtc cct cgg tca ggg    713
Thr Ala Arg Pro Ala Pro Met Val Phe Trp Lys Val Pro Arg Ser Gly
                135                                140                                145
att gaa aat agt aca gtg act ctg tct cac cca aat ggg acc acg tct    761
Ile Glu Asn Ser Thr Val Thr Leu Ser His Pro Asn Gly Thr Thr Ser
                150                                155                                160
gtt acc agc atc ctc cat atc aaa gac cct aag aat cag gtg ggg aag    809
Val Thr Ser Ile Leu His Ile Lys Asp Pro Lys Asn Gln Val Gly Lys
165                                170                                175                                180
gag gtg atc tgc cag gtg ctg cac ctg ggg act gtg acc gac ttt aag    857
Glu Val Ile Cys Gln Val Leu His Leu Gly Thr Val Thr Asp Phe Lys
                185                                190                                195
caa acc gtc aac aaa ggc tat tgg ttt tca gtt ccg cta ttg cta agc    905
Gln Thr Val Asn Lys Gly Tyr Trp Phe Ser Val Pro Leu Leu Leu Ser

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      200      205      210
att gtt tcc ctg gta att ctt ctc gtc cta atc tca atc tta ctg tac      953
Ile Val Ser Leu Val Ile Leu Leu Val Leu Ile Ser Ile Leu Leu Tyr
      215      220      225
tgg aaa cgt cac cgg aat cag gac cga gag ccc taaataagtc acacagcacc 1006
Trp Lys Arg His Arg Asn Gln Asp Arg Glu Pro
      230      235
ctgaaagtga ttccctgggtc tacttgaatt tgacacaaga gaaaagcagg agaaaaaggg 1066
gccattctcc aaaggacctg aaagagcaaa agagggtggga gcgaaagcct taaggatccc 1126
acgacttttt actgccatct gagctactca gtgtttgaat cccaagagga agtcagttta 1186
cctctcaggt ctgttgtagg acttgatttt gtaaagcaat gccatgttat gtggttgaaa 1246
gggcactgga cttagttagt atcaggagca ctgagctcac agactgactt gggctcctac 1306
tggtggggac ctctgttagt cactttacct catccaaagt ataaaggaat tggaccaaata 1366
aatttaccac atagctctaa aacttaattt aaaatgtaat tccagaaaaa aaaagggaat 1426
aagcaaaggg ggaagaattg aaagagagag agaagaaaga atacagagag cttacctttt 1486
gcctttctgt tgatgttaca tctcttcttc ctatgttctt aggtctatga gtctgtttcc 1546
ccatcatttg gtatctagtc cagttcctgc ttactgcttt gctaatagct ggccttgcta 1606
gaatccttgg tttcactgct gttcttcatg tgcttctatg agatttactc caacacaaat 1666
aggactgaat ttattgtgaa gtaacattgg caatcttaac ttattcattt aacttatttt 1726
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ctccctgtcc atttgtctta taacatgacc cagccctatt ttacgtcatt ctaaattcag 1846
cctcatataa tgaaaataca ttatgaaaac agatgttttag gagatttcct gtatagcagt 1906
cagccaattc atatgctttg tctctgctgg cttctttttc catgcgttaa cttttcccaa 1966
tagcagagga ggcaaatatg agcatacaat ccctttgttc taaagatatt gttccagcta 2026
gtggaatgat gttgaatctt taataaccat aattagttgc tttttcagta tcttctgctt 2086
tgtctgtgtc tatccagtgg cctaggaatt aaagtgtgag ttgttttcgc tgttaaattg 2146
gatatttata tatatatata tagcaagatt ttcattgtgt atttaattct gtattgtttc 2206
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<210> 12
 <211> 262
 <212> PRT
 <213> Homo sapiens

<220>
 <221> SIGNAL
 <222> 1..23

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Ala Val Val Leu Cys Thr Ala Gln Val Gln Val Val Thr Gln Asp Glu
      -5      1      5
Arg Glu Gln Leu Tyr Thr Thr Ala Ser Leu Lys Cys Ser Leu Gln Asn
10      15      20      25
Ala Gln Glu Ala Leu Ile Val Thr Trp Gln Lys Lys Lys Ala Val Ser
      30      35      40
Pro Glu Asn Met Val Thr Phe Ser Glu Asn His Gly Val Val Ile Gln
      45      50      55
Pro Ala Tyr Lys Asp Lys Ile Asn Ile Thr Gln Leu Gly Leu Gln Asn
      60      65      70
Ser Thr Ile Thr Phe Trp Asn Ile Thr Leu Glu Asp Glu Gly Cys Tyr
      75      80      85
Met Cys Leu Phe Asn Thr Phe Gly Phe Gly Lys Ile Ser Gly Thr Ala
90      95      100      105

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Cys Leu Thr Val Tyr Val Gln Pro Ile Val Ser Leu His Tyr Lys Phe
 110 115 120
 Ser Glu Asp His Leu Asn Ile Thr Cys Ser Ala Thr Ala Arg Pro Ala
 125 130 135
 Pro Met Val Phe Trp Lys Val Pro Arg Ser Gly Ile Glu Asn Ser Thr
 140 145 150
 Val Thr Leu Ser His Pro Asn Gly Thr Thr Ser Val Thr Ser Ile Leu
 155 160 165
 His Ile Lys Asp Pro Lys Asn Gln Val Gly Lys Glu Val Ile Cys Gln
 170 175 180 185
 Val Leu His Leu Gly Thr Val Thr Asp Phe Lys Gln Thr Val Asn Lys
 190 195 200
 Gly Tyr Trp Phe Ser Val Pro Leu Leu Leu Ser Ile Val Ser Leu Val
 205 210 215
 Ile Leu Leu Val Leu Ile Ser Ile Leu Leu Tyr Trp Lys Arg His Arg
 220 225 230
 Asn Gln Asp Arg Glu Pro
 235

<210> 13
 <211> 1597
 <212> DNA
 <213> Homo sapiens

<220>
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 <222> 1..65

<220>
 <221> CDS
 <222> 66..1334

<220>
 <221> 3'UTR
 <222> 1335..1597

<220>
 <221> polyA_signal
 <222> 1558..1563

<220>
 <221> polyA_site
 <222> 1582..1597

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 Met Glu Arg Met Leu Pro Leu Leu Thr Leu Gly Leu Leu Ala Ala
 -20 -15 -10
 ggg ttc tgc cct gct gtc ctc tgc cac cct aac agc cca ctt gac gag 158
 Gly Phe Cys Pro Ala Val Leu Cys His Pro Asn Ser Pro Leu Asp Glu
 -5 1 5
 gag aat ctg acc cag gag aac caa gac cga ggg aca cac gtg gac ctc 206
 Glu Asn Leu Thr Gln Glu Asn Gln Asp Arg Gly Thr His Val Asp Leu
 10 15 20

gga tta gcc tcc gcc aac gtg gac ttc gct ctc agc ctg tac aag cag	254
Gly Leu Ala Ser Ala Asn Val Asp Phe Ala Leu Ser Leu Tyr Lys Gln	
25 30 35 40	
tta gtc ctg aag gcc cct gat aag aat gtc atc ttc tcc cca ctg agc	302
Leu Val Leu Lys Ala Pro Asp Lys Asn Val Ile Phe Ser Pro Leu Ser	
45 50 55	
atc tcc acc gcc ttg gcc ttc ctg tct ctg ggg gcc cat aat acc acc	350
Ile Ser Thr Ala Leu Ala Phe Leu Ser Leu Gly Ala His Asn Thr Thr	
60 65 70	
ctg aca gag att ctc aaa ggc ctc aag ttc aac ctc acg gag act tct	398
Leu Thr Glu Ile Leu Lys Gly Leu Lys Phe Asn Leu Thr Glu Thr Ser	
75 80 85	
gag gca gaa att cac cag agc ttc cag cac ctc ctg cgc acc ctc aat	446
Glu Ala Glu Ile His Gln Ser Phe Gln His Leu Leu Arg Thr Leu Asn	
90 95 100	
cag tcc agc gat gag ctg cag ctg agt atg gga aat gcc atg ttt gtc	494
Gln Ser Ser Asp Glu Leu Gln Leu Ser Met Gly Asn Ala Met Phe Val	
105 110 115 120	
aaa gag caa ctc agt ctg ctg gac agg ttc acg gag gat gcc aag agg	542
Lys Glu Gln Leu Ser Leu Leu Asp Arg Phe Thr Glu Asp Ala Lys Arg	
125 130 135	
ctg tat ggc tcc gag gcc ttt gcc act gac ttt cag gac tca gct gca	590
Leu Tyr Gly Ser Glu Ala Phe Ala Thr Asp Phe Gln Asp Ser Ala Ala	
140 145 150	
gct aag aag ctc atc aac gac tac gtg aag aat gga act agg ggg aaa	638
Ala Lys Lys Leu Ile Asn Asp Tyr Val Lys Asn Gly Thr Arg Gly Lys	
155 160 165	
atc aca gat ctg atc aag gac ctt gac tcg cag aca atg atg gtc ctg	686
Ile Thr Asp Leu Ile Lys Asp Leu Asp Ser Gln Thr Met Met Val Leu	
170 175 180	
gtg aat tac atc ttc ttt aaa gcc aaa tgg gag atg ccc ttt gac ccc	734
Val Asn Tyr Ile Phe Phe Lys Ala Lys Trp Glu Met Pro Phe Asp Pro	
185 190 195 200	
caa gat act cat cag tca agg ttc tac ttg agc aag aaa aag tgg gta	782
Gln Asp Thr His Gln Ser Arg Phe Tyr Leu Ser Lys Lys Lys Trp Val	
205 210 215	
atg gtg ccc atg atg agt ttg cat cac ctg act ata cct tac ttc cgg	830
Met Val Pro Met Met Ser Leu His His Leu Thr Ile Pro Tyr Phe Arg	
220 225 230	
gac gag gag ctg tcc tgc acc gtg gtg gag ctg aag tac aca ggc aat	878
Asp Glu Glu Leu Ser Cys Thr Val Val Glu Leu Lys Tyr Thr Gly Asn	
235 240 245	
gcc agc gca ctc ttc atc ctc cct gat caa gac aag atg gag gaa gtg	926
Ala Ser Ala Leu Phe Ile Leu Pro Asp Gln Asp Lys Met Glu Glu Val	
250 255 260	
gaa gcc atg ctg ctc cca gag acc ctg aag cgg tgg aga gac tct ctg	974
Glu Ala Met Leu Leu Pro Glu Thr Leu Lys Arg Trp Arg Asp Ser Leu	
265 270 275 280	
gag ttc aga gag ata ggt gag ctc tac ctg cca aag ttt tcc atc tcg	1022
Glu Phe Arg Glu Ile Gly Glu Leu Tyr Leu Pro Lys Phe Ser Ile Ser	
285 290 295	
agg gac tat aac ctg aac gac ata ctt ctc cag ctg ggc att gag gaa	1070
Arg Asp Tyr Asn Leu Asn Asp Ile Leu Leu Gln Leu Gly Ile Glu Glu	
300 305 310	
gcc ttc acc agc aag gct gac ctg tca ggg atc aca ggg gcc agg aac	1118

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Ala Phe Thr Ser Lys Ala Asp Leu Ser Gly Ile Thr Gly Ala Arg Asn
      315                      320                      325
cta gca gtc tcc cag gtg gtc cat aag gct gtg ctt gat gta ttt gag 1166
Leu Ala Val Ser Gln Val Val His Lys Ala Val Leu Asp Val Phe Glu
      330                      335                      340
gag ggc aca gaa gca tct gct gcc aca gca gtc aaa atc acc ctc ctt 1214
Glu Gly Thr Glu Ala Ser Ala Ala Thr Ala Val Lys Ile Thr Leu Leu
      345                      350                      355                      360
tct gca tta gtg gag aca agg acc att gtg cgt ttc aac agg ccc ttc 1262
Ser Ala Leu Val Glu Thr Arg Thr Ile Val Arg Phe Asn Arg Pro Phe
      365                      370                      375
ctg atg atc att gtc cct aca gac acc cag aac atc ttc ttc atg agc 1310
Leu Met Ile Ile Val Pro Thr Asp Thr Gln Asn Ile Phe Phe Met Ser
      380                      385                      390
aaa gtc acc aat ccc aag caa gcc tagagcttgc catcaagcag tggggctctc 1364
Lys Val Thr Asn Pro Lys Gln Ala
      395                      400
agtaaggaac ttggaatgca agctggatgc ctgggtctctt gggcacagcc tggcccctgt 1424
gcaccgagtg gccatggcat gtgtggccct gtctgcttat ccttggaagg tgacagcgat 1484
tccctgtgta gctctcacat gcacaggggc ccatggactc ttcagtctgg agggctcctgg 1544
gcctcctgac agcaataaat aatttcgttg gacacgcaaa aaaaaaaaaa aaa 1597

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<210> 14
 <211> 423
 <212> PRT
 <213> Homo sapiens

<220>
 <221> SIGNAL
 <222> 1..23

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<400> 14
Met Glu Arg Met Leu Pro Leu Leu Thr Leu Gly Leu Leu Ala Ala Gly
      -20                      -15                      -10
Phe Cys Pro Ala Val Leu Cys His Pro Asn Ser Pro Leu Asp Glu Glu
      -5                      1                      5
Asn Leu Thr Gln Glu Asn Gln Asp Arg Gly Thr His Val Asp Leu Gly
      10                      15                      20                      25
Leu Ala Ser Ala Asn Val Asp Phe Ala Leu Ser Leu Tyr Lys Gln Leu
      30                      35                      40
Val Leu Lys Ala Pro Asp Lys Asn Val Ile Phe Ser Pro Leu Ser Ile
      45                      50                      55
Ser Thr Ala Leu Ala Phe Leu Ser Leu Gly Ala His Asn Thr Thr Leu
      60                      65                      70
Thr Glu Ile Leu Lys Gly Leu Lys Phe Asn Leu Thr Glu Thr Ser Glu
      75                      80                      85
Ala Glu Ile His Gln Ser Phe Gln His Leu Leu Arg Thr Leu Asn Gln
      90                      95                      100                      105
Ser Ser Asp Glu Leu Gln Leu Ser Met Gly Asn Ala Met Phe Val Lys
      110                      115                      120
Glu Gln Leu Ser Leu Leu Asp Arg Phe Thr Glu Asp Ala Lys Arg Leu
      125                      130                      135
Tyr Gly Ser Glu Ala Phe Ala Thr Asp Phe Gln Asp Ser Ala Ala Ala
      140                      145                      150
Lys Lys Leu Ile Asn Asp Tyr Val Lys Asn Gly Thr Arg Gly Lys Ile

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155	160	165														
Thr	Asp	Leu	Ile	Lys	Asp	Leu	Asp	Ser	Gln	Thr	Met	Met	Val	Leu	Val	
170					175					180						185
Asn	Tyr	Ile	Phe	Phe	Lys	Ala	Lys	Trp	Glu	Met	Pro	Phe	Asp	Pro	Gln	
				190					195					200		
Asp	Thr	His	Gln	Ser	Arg	Phe	Tyr	Leu	Ser	Lys	Lys	Lys	Trp	Val	Met	
			205					210					215			
Val	Pro	Met	Met	Ser	Leu	His	His	Leu	Thr	Ile	Pro	Tyr	Phe	Arg	Asp	
		220					225					230				
Glu	Glu	Leu	Ser	Cys	Thr	Val	Val	Glu	Leu	Lys	Tyr	Thr	Gly	Asn	Ala	
235						240				245						
Ser	Ala	Leu	Phe	Ile	Leu	Pro	Asp	Gln	Asp	Lys	Met	Glu	Glu	Val	Glu	
250					255					260						265
Ala	Met	Leu	Leu	Pro	Glu	Thr	Leu	Lys	Arg	Trp	Arg	Asp	Ser	Leu	Glu	
				270					275					280		
Phe	Arg	Glu	Ile	Gly	Glu	Leu	Tyr	Leu	Pro	Lys	Phe	Ser	Ile	Ser	Arg	
		285					290						295			
Asp	Tyr	Asn	Leu	Asn	Asp	Ile	Leu	Leu	Gln	Leu	Gly	Ile	Glu	Glu	Ala	
	300					305						310				
Phe	Thr	Ser	Lys	Ala	Asp	Leu	Ser	Gly	Ile	Thr	Gly	Ala	Arg	Asn	Leu	
315						320					325					
Ala	Val	Ser	Gln	Val	Val	His	Lys	Ala	Val	Leu	Asp	Val	Phe	Glu	Glu	
330				335					340							345
Gly	Thr	Glu	Ala	Ser	Ala	Ala	Thr	Ala	Val	Lys	Ile	Thr	Leu	Leu	Ser	
			350					355					360			
Ala	Leu	Val	Glu	Thr	Arg	Thr	Ile	Val	Arg	Phe	Asn	Arg	Pro	Phe	Leu	
		365				370					375					
Met	Ile	Ile	Val	Pro	Thr	Asp	Thr	Gln	Asn	Ile	Phe	Phe	Met	Ser	Lys	
	380					385					390					
Val	Thr	Asn	Pro	Lys	Gln	Ala										
395					400											

<210> 15
 <211> 1397
 <212> DNA
 <213> Homo sapiens

<220>
 <221> 5'UTR
 <222> 1..152

<220>
 <221> CDS
 <222> 153..806

<220>
 <221> 3'UTR
 <222> 807..1397

<220>
 <221> polyA_signal
 <222> 1362..1367

<220>
 <221> polyA_site

<222> 1382..1397

<400> 15

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agacctagga ggtgcgacag acccgcgggg caaacggact ggggccaaga gccgggagcg 60
cgggcgcaaa ggcaccaggg cccgcccagg gcgcctcgca gcacggcctt ggggggttctg 120
cgggccttcg ggtgcgcgtc tcgcctctag cc atg ggg tcc gca gcg ttg gag 173
                               Met Gly Ser Ala Ala Leu Glu
                               1                               5
atc ctg ggc ctg gtg ctg tgc ctg gtg ggc tgg ggg ggt ctg atc ctg 221
Ile Leu Gly Leu Val Leu Cys Leu Val Gly Trp Gly Gly Leu Ile Leu
                               10                               15                               20
gcg tgc ggg ctg ccc atg tgg cag gtg acc gcc ttc ctg gac cac aac 269
Ala Cys Gly Leu Pro Met Trp Gln Val Thr Ala Phe Leu Asp His Asn
                               25                               30                               35
atc gtg acg gcg cag acc acc tgg aag ggg ctg tgg atg tcg tgc gtg 317
Ile Val Thr Ala Gln Thr Thr Trp Lys Gly Leu Trp Met Ser Cys Val
40                               45                               50                               55
gtg cag agc acc ggg cac atg cag tgc aaa gtg tac gac tcg gtg ctg 365
Val Gln Ser Thr Gly His Met Gln Cys Lys Val Tyr Asp Ser Val Leu
                               60                               65                               70
gct ctg agc acc gag gtg cag gcg gcg cgg gcg ctc acc gtg agc gcc 413
Ala Leu Ser Thr Glu Val Gln Ala Ala Arg Ala Leu Thr Val Ser Ala
                               75                               80                               85
gtg ctg ctg gcg ttc gtt gcg ctc ttc gtg acc ctg gcg ggc gcg cag 461
Val Leu Leu Ala Phe Val Ala Leu Phe Val Thr Leu Ala Gly Ala Gln
90                               95                               100
tgc acc acc tgc gtg gcc ccg ggc ccg gcc aag gcg cgt gtg gcc ctc 509
Cys Thr Thr Cys Val Ala Pro Gly Pro Ala Lys Ala Arg Val Ala Leu
105                               110                               115
acg gga ggc gtg ctc tac ctg ttt tgc ggg ctg ctg gcg ctc gtg cca 557
Thr Gly Gly Val Leu Tyr Leu Phe Cys Gly Leu Leu Ala Leu Val Pro
120                               125                               130                               135
ctc tgc tgg ttc gcc aac att gtc gtc cgc gag ttt tac gac ccg tct 605
Leu Cys Trp Phe Ala Asn Ile Val Val Arg Glu Phe Tyr Asp Pro Ser
140                               145                               150
gtg ccc gtg tcg cag aag tac gag ctg ggc gca gcg ctg tac atc ggc 653
Val Pro Val Ser Gln Lys Tyr Glu Leu Gly Ala Ala Leu Tyr Ile Gly
155                               160                               165
tgg gcg gcc acc gcg ctg ctc atg gta ggc ggc tgc ctc ttg tgc tgc 701
Trp Ala Ala Thr Ala Leu Leu Met Val Gly Gly Cys Leu Leu Cys Cys
170                               175                               180
ggc gcc tgg gtc tgc acc ggc cgt ccc gac ctc agc ttc ccc gtg aag 749
Gly Ala Trp Val Cys Thr Gly Arg Pro Asp Leu Ser Phe Pro Val Lys
185                               190                               195
tac tca gcg ccg cgg cgg ccc acg gcc acc ggc gac aac gac aag aag 797
Tyr Ser Ala Pro Arg Arg Pro Thr Ala Thr Gly Asp Asn Asp Lys Lys
200                               205                               210                               215
aac tac gtc tgagggcgct gggcacggcc gggccccctcc tgccagccac 846
Asn Tyr Val
gcctgcgagg cgttggataa gcctggggag ccccgcatgg accgcggctt ccgcccgggta 906
gcgcggcgcg caggcttctc ggaacgtccg gctctgcgcc ccgacgcggc tcctggatcc 966
gctcctgcct gcgcccgcag ctgaccttct cctgccacta gcccggccct gcccttaaca 1026
gacggaatga agtttccttt tctgtgcgcg gcgctgtttc cataggcaga gcgggtgtca 1086
gactgaggat ttcgcttccc ctccaagacg ctgggggtct tggctgctgc cttacttccc 1146
agaggctcct gctgacttcg gaggggcgga tgcagagccc agggcccca ccggaagatg 1206

```

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tgtacagctg gtctttactc catcggcagg gcccgagccc agggaccagt gacttggcct 1266
ggacctcccg gtctcactcc agcatctccc caggcaaggc ttgtgggcac cggagcttga 1326
gagagggcgg gagtgggaag gctaagaatc tgcttagtaa atggtttgaa ctctgaaaaa 1386
aaaaaaaaa a 1397

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<210> 16
<211> 218
<212> PRT
<213> Homo sapiens

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<400> 16
Met Gly Ser Ala Ala Leu Glu Ile Leu Gly Leu Val Leu Cys Leu Val
1          5          10          15
Gly Trp Gly Gly Leu Ile Leu Ala Cys Gly Leu Pro Met Trp Gln Val
          20          25          30
Thr Ala Phe Leu Asp His Asn Ile Val Thr Ala Gln Thr Thr Trp Lys
          35          40          45
Gly Leu Trp Met Ser Cys Val Val Gln Ser Thr Gly His Met Gln Cys
          50          55          60
Lys Val Tyr Asp Ser Val Leu Ala Leu Ser Thr Glu Val Gln Ala Ala
65          70          75          80
Arg Ala Leu Thr Val Ser Ala Val Leu Leu Ala Phe Val Ala Leu Phe
          85          90          95
Val Thr Leu Ala Gly Ala Gln Cys Thr Thr Cys Val Ala Pro Gly Pro
          100          105          110
Ala Lys Ala Arg Val Ala Leu Thr Gly Gly Val Leu Tyr Leu Phe Cys
          115          120          125
Gly Leu Leu Ala Leu Val Pro Leu Cys Trp Phe Ala Asn Ile Val Val
          130          135          140
Arg Glu Phe Tyr Asp Pro Ser Val Pro Val Ser Gln Lys Tyr Glu Leu
145          150          155          160
Gly Ala Ala Leu Tyr Ile Gly Trp Ala Ala Thr Ala Leu Leu Met Val
          165          170          175
Gly Gly Cys Leu Leu Cys Cys Gly Ala Trp Val Cys Thr Gly Arg Pro
          180          185          190
Asp Leu Ser Phe Pro Val Lys Tyr Ser Ala Pro Arg Arg Pro Thr Ala
          195          200          205
Thr Gly Asp Asn Asp Lys Lys Asn Tyr Val
          210          215

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<210> 17
<211> 782
<212> DNA
<213> Homo sapiens

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<220>
<221> 5'UTR
<222> 1..62

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<220>
<221> CDS
<222> 63..572

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<220>
<221> 3'UTR

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<222> 573..782

<220>

<221> polyA_signal

<222> 750..755

<220>

<221> polyA_site

<222> 767..782

<400> 17

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ga atg cgg ctt caa ggg gct atc ttt gtg ctc ctg ccc cac ctg ggg 107
  Met Arg Leu Gln Gly Ala Ile Phe Val Leu Leu Pro His Leu Gly
    1          5          10          15
ccc atc ctg gtc tgg ctg ttc act cgt gat cac atg tct ggt tgg tgt 155
Pro Ile Leu Val Trp Leu Phe Thr Arg Asp His Met Ser Gly Trp Cys
    20          25          30
gag ggc ccg agg atg ctg tcc tgg tgc cca ttc tac aaa gtc tta ttg 203
Glu Gly Pro Arg Met Leu Ser Trp Cys Pro Phe Tyr Lys Val Leu Leu
    35          40          45
ctt gta cag aca gcc atc tac tct gtc gtg ggc tat gcc tcc tac ctg 251
Leu Val Gln Thr Ala Ile Tyr Ser Val Val Gly Tyr Ala Ser Tyr Leu
    50          55          60
gtg tgg aag gac ctg gga ggg ggc ttg ggg tgg ccc ctg gcc ctg cct 299
Val Trp Lys Asp Leu Gly Gly Gly Leu Gly Trp Pro Leu Ala Leu Pro
    65          70          75
ctt ggc ctc tat gct gat cag ctc acc atc agc tgg act gtc ctg gtt 347
Leu Gly Leu Tyr Ala Asp Gln Leu Thr Ile Ser Trp Thr Val Leu Val
    80          85          90          95
ctc ttt ttc aca gtc cac aac cct ggt ctg gcc ctg ctg cac ctg ctg 395
Leu Phe Phe Thr Val His Asn Pro Gly Leu Ala Leu Leu His Leu Leu
    100          105          110
ctg ctg tat ggg ctg gtg gtg agc aca gca ctg atc tgg cat ccc atc 443
Leu Leu Tyr Gly Leu Val Val Ser Thr Ala Leu Ile Trp His Pro Ile
    115          120          125
aac aaa ctg gct gcc ctg tta ctg ctg ccc tac cta gcc tgg ctc acc 491
Asn Lys Leu Ala Ala Leu Leu Leu Leu Pro Tyr Leu Ala Trp Leu Thr
    130          135          140
gtg act tca gcc ctc acc tac cac ctg tgg agg gac agc ctt tgt cca 539
Val Thr Ser Ala Leu Thr Tyr His Leu Trp Arg Asp Ser Leu Cys Pro
    145          150          155
gtg cac cag cct cag ccc acg gag aag agt gac tgaggcccta gggcatggga 592
Val His Gln Pro Gln Pro Thr Glu Lys Ser Asp
    160          165          170
gaggagggac gcccagggtg gggaggaaga gtctgcaagc agggctgtgg agttaggggtt 652
caccccaatg ggaccaccct cctgggtccc ctggtgccgt ttttccttag aaatcagaga 712
aatgggaaag ggggggaaac tgattttaca cttaaataat aaaatcctat tagtaaaaaa 772
aaaaaaaaaa 782

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<210> 18

<211> 170

<212> PRT

<213> Homo sapiens

<400> 18

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Met Arg Leu Gln Gly Ala Ile Phe Val Leu Leu Pro His Leu Gly Pro
1           5           10           15
Ile Leu Val Trp Leu Phe Thr Arg Asp His Met Ser Gly Trp Cys Glu
          20           25           30
Gly Pro Arg Met Leu Ser Trp Cys Pro Phe Tyr Lys Val Leu Leu Leu
          35           40           45
Val Gln Thr Ala Ile Tyr Ser Val Val Gly Tyr Ala Ser Tyr Leu Val
          50           55           60
Trp Lys Asp Leu Gly Gly Gly Leu Gly Trp Pro Leu Ala Leu Pro Leu
65           70           75           80
Gly Leu Tyr Ala Asp Gln Leu Thr Ile Ser Trp Thr Val Leu Val Leu
          85           90           95
Phe Phe Thr Val His Asn Pro Gly Leu Ala Leu Leu His Leu Leu Leu
          100          105          110
Leu Tyr Gly Leu Val Val Ser Thr Ala Leu Ile Trp His Pro Ile Asn
          115          120          125
Lys Leu Ala Ala Leu Leu Leu Leu Pro Tyr Leu Ala Trp Leu Thr Val
          130          135          140
Thr Ser Ala Leu Thr Tyr His Leu Trp Arg Asp Ser Leu Cys Pro Val
145          150          155          160
His Gln Pro Gln Pro Thr Glu Lys Ser Asp
          165          170

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<210> 19

<211> 789

<212> DNA

<213> Homo sapiens

<220>

<221> 5'UTR

<222> 1..62

<220>

<221> CDS

<222> 63..572

<220>

<221> 3'UTR

<222> 573..789

<220>

<221> polyA_signal

<222> 750..755

<220>

<221> polyA_site

<222> 774..789

<400> 19

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atatgtcatc aggcccccgc cctgggaggt gtgctgccag agattttgcc tcttcaaggt 60
ga atg cgg ctt caa ggg gct atc ttt gtg ctc ctg ccc cac ctg ggg 107
Met Arg Leu Gln Gly Ala Ile Phe Val Leu Leu Pro His Leu Gly
1           5           10           15
ccc atc ctg gtc tgg ctg ttc act cgt gat cac atg tct ggt ttg tgt 155

```

```

Pro Ile Leu Val Trp Leu Phe Thr Arg Asp His Met Ser Gly Leu Cys
      20      25      30
gag ggc ccg agg atg ctg tcc tgg tgc cca ttc tac aaa gtc tta ttg 203
Glu Gly Pro Arg Met Leu Ser Trp Cys Pro Phe Tyr Lys Val Leu Leu
      35      40      45
ctt gta cag aca gcc atc tac tct gtc gtg ggc tat gcc tcc tac ctg 251
Leu Val Gln Thr Ala Ile Tyr Ser Val Val Gly Tyr Ala Ser Tyr Leu
      50      55      60
gtg tgg aag gac ctg gga ggg ggc ttg ggg tgg ccc ctg gcc ctg cct 299
Val Trp Lys Asp Leu Gly Gly Gly Leu Gly Trp Pro Leu Ala Leu Pro
      65      70      75
ctt ggc ctc tat gct gtt cag ctc acc atc agc tgg act gtc ctg gtt 347
Leu Gly Leu Tyr Ala Val Gln Leu Thr Ile Ser Trp Thr Val Leu Val
      80      85      90      95
ctc ttt ttc aca gtc cac aac cct ggt ctg gcc ctg ctg cac ctg ctg 395
Leu Phe Phe Thr Val His Asn Pro Gly Leu Ala Leu Leu His Leu Leu
      100      105      110
ctg ctg tat ggg ctg gtg gtg agc aca gca ctg atc tgg cat ccc atc 443
Leu Leu Tyr Gly Leu Val Val Ser Thr Ala Leu Ile Trp His Pro Ile
      115      120      125
aac aaa ctg gct gcc ctg tta ctg ctg ccc tac cta gcc tgg ctc acc 491
Asn Lys Leu Ala Ala Leu Leu Leu Leu Pro Tyr Leu Ala Trp Leu Thr
      130      135      140
gtg act tca gcc ctc acc tac cac ctg tgg agg gac agc ctt tgt cca 539
Val Thr Ser Ala Leu Thr Tyr His Leu Trp Arg Asp Ser Leu Cys Pro
      145      150      155
gtg cac cag cct cag ccc acg gag aag agt gac tgaggcccta gggcatggga 592
Val His Gln Pro Gln Pro Thr Glu Lys Ser Asp
      160      165      170
gaggagggac gcccaggggtg gggaggaaga gtctgcaagc agggctgtgg agttaggggtt 652
caccccaatg ggaccaccct cctgggtccc ctggtgccgt ttttccttag aaatcagaga 712
aatgggaaag ggggggaaac tgattttaca cttaaataat aaaatcctat tagtaactct 772
caaaaaaaaa aaaaaaa 789

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<210> 20
 <211> 170
 <212> PRT
 <213> Homo sapiens

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<400> 20
Met Arg Leu Gln Gly Ala Ile Phe Val Leu Leu Pro His Leu Gly Pro
1      5      10      15
Ile Leu Val Trp Leu Phe Thr Arg Asp His Met Ser Gly Leu Cys Glu
      20      25      30
Gly Pro Arg Met Leu Ser Trp Cys Pro Phe Tyr Lys Val Leu Leu Leu
      35      40      45
Val Gln Thr Ala Ile Tyr Ser Val Val Gly Tyr Ala Ser Tyr Leu Val
      50      55      60
Trp Lys Asp Leu Gly Gly Gly Leu Gly Trp Pro Leu Ala Leu Pro Leu
      65      70      75      80
Gly Leu Tyr Ala Val Gln Leu Thr Ile Ser Trp Thr Val Leu Val Leu
      85      90      95
Phe Phe Thr Val His Asn Pro Gly Leu Ala Leu Leu His Leu Leu Leu
      100      105      110
Leu Tyr Gly Leu Val Val Ser Thr Ala Leu Ile Trp His Pro Ile Asn

```

<400> 21															
aaaaacttta cggcagggcgt cgcgcgtcgct agctagtcgt tctgaagcgg cggccagaga 60															
agagtcaagg gcacgagcat cggcc atg cct ttc ttg gac atc cag aaa agg 112															
Met Pro Phe Leu Asp Ile Gln Lys Arg															
1 5															
ttc ggc ctt aac ata gat cga tgg ttg aca atc cag agt tgt gaa cag 160															
Phe Gly Leu Asn Ile Asp Arg Trp Leu Thr Ile Gln Ser Cys Glu Gln															
10 15 20 25															
ccc tac aag atg gct ggt cga tgc cat gct ttt gaa aaa gaa tgg ata 208															
Pro Tyr Lys Met Ala Gly Arg Cys His Ala Phe Glu Lys Glu Trp Ile															
30 35 40															
gaa tgt gca cat gga atc ggt tat act cgg gca gag aaa gag tgc aag 256															
Glu Cys Ala His Gly Ile Gly Tyr Thr Arg Ala Glu Lys Glu Cys Lys															
45 50 55															
ata gaa tat gat gat ttc gta gag tgt ttg ctt cgg cag aaa acg atg 304															
Ile Glu Tyr Asp Asp Phe Val Glu Cys Leu Leu Arg Gln Lys Thr Met															
60 65 70															
aga cgt gca ggt acc atc agg aag cag cgg gat aag ctg ata aag gaa 352															
Arg Arg Ala Gly Thr Ile Arg Lys Gln Arg Asp Lys Leu Ile Lys Glu															
75 80 85															
gga aag tac acc cct cca cct cac cac att ggc aag ggg gag cct tgg 400															
Gly Lys Tyr Thr Pro Pro Pro His His Ile Gly Lys Gly Glu Pro Trp															

90 95 100 105
 ccc tgaacagagc agctgctgat gtctggaggc tgattttcct gttctctgtt 453
 Pro
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 Cys His Ala Phe Glu Lys Glu Trp Ile Glu Cys Ala His Gly Ile Gly
 35 40 45
 Tyr Thr Arg Ala Glu Lys Glu Cys Lys Ile Glu Tyr Asp Asp Phe Val
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 Glu Cys Leu Leu Arg Gln Lys Thr Met Arg Arg Ala Gly Thr Ile Arg
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gaggatgaag ttgaaattct gggacctttc cctgctcaga cccctccctg gctg atg 417
 Met
 1
 gcc agc cgg agc agt gac aag gat ggt gac tct gtc cac acg gcc agc 465
 Ala Ser Arg Ser Ser Asp Lys Asp Gly Asp Ser Val His Thr Ala Ser
 5 10 15
 gaa gtc ccg ctg acc cca cgg acc aat tcc ccg gat gga aga cgc tcg 513
 Glu Val Pro Leu Thr Pro Arg Thr Asn Ser Pro Asp Gly Arg Arg Ser
 20 25 30
 tcc tca gac aca tcc aag tct aca tac agc ctg acg cgg agg att tcg 561
 Ser Ser Asp Thr Ser Lys Ser Thr Tyr Ser Leu Thr Arg Arg Ile Ser
 35 40 45
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 Ser Leu Glu Ser Arg Arg Pro Ser Ser Pro Leu Ile Asp Ile Lys Pro
 50 55 60 65
 atc gag ttt ggc gtt ctc agc gcc aag aag gag ccc atc caa cct tcg 657
 Ile Glu Phe Gly Val Leu Ser Ala Lys Lys Glu Pro Ile Gln Pro Ser
 70 75 80
 gtg ctc aga cgg acc tat aac ccc gac gac tat ttc agg aag ttc gaa 705
 Val Leu Arg Arg Thr Tyr Asn Pro Asp Asp Tyr Phe Arg Lys Phe Glu
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 ccc cac ctg tac tcc ctc gac tcc aac agc gac gat gtg gac tct ctg 753
 Pro His Leu Tyr Ser Leu Asp Ser Asn Ser Asp Asp Val Asp Ser Leu
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 Thr Asp Glu Glu Ile Leu Ser Lys Tyr Gln Leu Gly Met Gln His Phe
 115 120 125
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 Ser Thr Gln Tyr Asp Leu Leu His Asn His Leu Thr Val Arg Val Ile
 130 135 140 145
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 Glu Ala Arg Asp Leu Pro Pro Pro Ile Ser His Asp Gly Ser Arg Gln
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 Asp Met Ala His Ser Asn Pro Tyr Val Lys Ile Cys Leu Leu Pro Asp
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 Gln Lys Asn Ser Lys Gln Thr Gly Val Lys Arg Lys Thr Gln Lys Pro
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 195 200 205
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 Arg Arg Thr Leu Leu Leu Thr Val Val Asp Phe Asp Lys Phe Ser Arg
 210 215 220 225
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 His Cys Val Ile Gly Lys Val Ser Val Pro Leu Cys Glu Val Asp Leu
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 Val Lys Gly Gly His Trp Trp Lys Ala Leu Ile Pro Ser Ser Gln Asn
 245 250 255
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 Glu Val Glu Leu Gly Glu Leu Leu Leu Ser Leu Asn Tyr Leu Pro Ser
 260 265 270
 gct ggc aga ctg aat gtt gat gtc att cga gcc aag caa ctt ctt cag 1281

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Thr	Asp	Val	Ser	Gln	Gly	Ser	Asp	Pro	Phe	Val	Lys	Ile	Gln	Leu	Val	
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cat	gga	ctc	aaa	ctt	gtg	aaa	acc	aag	aag	acg	tcc	ttc	tta	agg	ggc	1377
His	Gly	Leu	Lys	Leu	Val	Lys	Thr	Lys	Lys	Thr	Ser	Phe	Leu	Arg	Gly	
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aca	att	gat	cct	ttc	tac	aat	gaa	tcc	ttc	agc	ttc	aaa	gtt	ccc	caa	1425
Thr	Ile	Asp	Pro	Phe	Tyr	Asn	Glu	Ser	Phe	Ser	Phe	Lys	Val	Pro	Gln	
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gaa	gaa	ctg	gaa	aat	gcc	agc	cta	gtg	ttt	aca	gtt	ttc	ggc	cac	aac	1473
Glu	Glu	Leu	Glu	Asn	Ala	Ser	Leu	Val	Phe	Thr	Val	Phe	Gly	His	Asn	
		340				345						350				
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Met	Lys	Ser	Ser	Asn	Asp	Phe	Ile	Gly	Arg	Ile	Val	Ile	Gly	Gln	Tyr	
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tct	tca	ggc	ccc	tct	gag	acc	aac	cac	tgg	agg	cgc	atg	ctc	aac	acg	1569
Ser	Ser	Gly	Pro	Ser	Glu	Thr	Asn	His	Trp	Arg	Arg	Met	Leu	Asn	Thr	
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His	Arg	Thr	Ala	Val	Glu	Gln	Trp	His	Ser	Leu	Arg	Ser	Arg	Ala	Glu	
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Cys	Asp	Arg	Val	Ser	Pro	Ala	Ser	Leu	Glu	Val	Thr					
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Glu	Pro	His	Leu	Tyr	Ser	Leu	Asp	Ser	Asn	Ser	Asp	Asp	Val	Asp	Ser	
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Leu	Thr	Asp	Glu	Glu	Ile	Leu	Ser	Lys	Tyr	Gln	Leu	Gly	Met	Gln	His	
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Phe	Ser	Thr	Gln	Tyr	Asp	Leu	Leu	His	Asn	His	Leu	Thr	Val	Arg	Val	
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Ile	Glu	Ala	Arg	Asp	Leu	Pro	Pro	Pro	Ile	Ser	His	Asp	Gly	Ser	Arg	
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Gln	Asp	Met	Ala	His	Ser	Asn	Pro	Tyr	Val	Lys	Ile	Cys	Leu	Leu	Pro	
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Arg	His	Cys	Val	Ile	Gly	Lys	Val	Ser	Val	Pro	Leu	Cys	Glu	Val	Asp	
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Leu	Val	Lys	Gly	Gly	His	Trp	Trp	Lys	Ala	Leu	Ile	Pro	Ser	Ser	Gln	
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Ser	Ala	Gly	Arg	Leu	Asn	Val	Asp	Val	Ile	Arg	Ala	Lys	Gln	Leu	Leu	
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Tyr	Ser	Ser	Gly	Pro	Ser	Glu	Thr	Asn	His	Trp	Arg	Arg	Met	Leu	Asn	
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Thr	His	Arg	Thr	Ala	Val	Glu	Gln	Trp	His	Ser	Leu	Arg	Ser	Arg	Ala	
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Glu	Cys	Asp	Arg	Val	Ser	Pro	Ala	Ser	Leu	Glu	Val	Thr				
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          Met Asp Pro Ala Arg Pro Leu Gly Leu Ser Ile Leu
                    -20                    -15
ctg ctt ttc ctg acg gag gct gca ctg ggc gat gct gct cag gag cca 159
Leu Leu Phe Leu Thr Glu Ala Ala Leu Gly Asp Ala Ala Gln Glu Pro
          -10                    -5                    1
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Thr Gly Asn Asn Ala Glu Ile Cys Leu Leu Pro Leu Asp Tyr Gly Pro
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tgc cgg gcc cta ctt ctc cgt tac tac tac gac agg tac acg cag agc 255
Cys Arg Ala Leu Leu Leu Arg Tyr Tyr Tyr Asp Arg Tyr Thr Gln Ser
          25          30          35
tgc cgc cag ttc ctg tac ggg ggc tgc gag ggc aac gcc aac aat ttc 303
Cys Arg Gln Phe Leu Tyr Gly Gly Cys Glu Gly Asn Ala Asn Asn Phe
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tac acc tgg gag gct tgc gac gat ctt gct gga gga tagaaaaagt 349
Tyr Thr Trp Glu Ala Cys Asp Asp Leu Ala Gly Gly
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Ala Glu Ile Cys Leu Leu Pro Leu Asp Tyr Gly Pro Cys Arg Ala Leu
10          15          20
Leu Leu Arg Tyr Tyr Tyr Asp Arg Tyr Thr Gln Ser Cys Arg Gln Phe
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Leu Tyr Gly Gly Cys Glu Gly Asn Ala Asn Asn Phe Tyr Thr Trp Glu
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60

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 Leu Ala Leu Leu Ser Ala Phe Ser Ala Thr Gln Ala Arg Lys Gly Phe
 -10 -5 1
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 Trp Asp Tyr Phe Ser Gln Thr Ser Gly Asp Lys Gly Arg Val Glu Gln
 5 10 15 20
 atc cat cag cag aag atg gct cgc gag ccc gcg acc ctg aaa gac agc 197
 Ile His Gln Gln Lys Met Ala Arg Glu Pro Ala Thr Leu Lys Asp Ser
 25 30 35
 ctt gag caa gac ctc aac aat atg aac aag ttc ctg gaa aag ctg agg 245
 Leu Glu Gln Asp Leu Asn Asn Met Asn Lys Phe Leu Glu Lys Leu Arg
 40 45 50
 cct ctg agt ggg agc gag gct cct cgg ctc cca cag gac ccg gtg ggc 293
 Pro Leu Ser Gly Ser Glu Ala Pro Arg Leu Pro Gln Asp Pro Val Gly
 55 60 65
 atg cgg cgg cag ctg cag gag gag ttg gag gag gtg aag gct cgc ctc 341
 Met Arg Arg Gln Leu Gln Glu Glu Leu Glu Glu Val Lys Ala Arg Leu
 70 75 80
 cag ccc tac atg gca gag gcg cac gag ctg gtg ggc tgg aat ttg gag 389
 Gln Pro Tyr Met Ala Glu Ala His Glu Leu Val Gly Trp Asn Leu Glu
 85 90 95 100
 ggc ttg cgg cag caa ctg aag ccc tac acg atg gat ctg atg gag cag 437
 Gly Leu Arg Gln Gln Leu Lys Pro Tyr Thr Met Asp Leu Met Glu Gln
 105 110 115

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gaa gac acc aag gcc cag ttg ctg ggg ggc gtg gac gag gct tgg gct      533
Glu Asp Thr Lys Ala Gln Leu Leu Gly Gly Val Asp Glu Ala Trp Ala
      135      140      145
ttg ctg cag gga ctg cag agc cgc gtg gtg cac cac acc ggc cgc ttc      581
Leu Leu Gln Gly Leu Gln Ser Arg Val Val His His Thr Gly Arg Phe
      150      155      160
aaa gag ctc ttc cac cca tac gcc gag agc ctg gtg agc ggc atc ggg      629
Lys Glu Leu Phe His Pro Tyr Ala Glu Ser Leu Val Ser Gly Ile Gly
      165      170      175      180
cgc cac gtg cag gag ctg cac cgc agt gtg gct ccg cac gcc ccc gcc      677
Arg His Val Gln Glu Leu His Arg Ser Val Ala Pro His Ala Pro Ala
      185      190      195
agc ccc gcg cgc ctc agt cgc tgc gtg cag gtg ctc tcc cgg aag ctc      725
Ser Pro Ala Arg Leu Ser Arg Cys Val Gln Val Leu Ser Arg Lys Leu
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acg ctc aag gcc aag gcc ctg cac gca cgc atc cag cag aac ctg gac      773
Thr Leu Lys Ala Lys Ala Leu His Ala Arg Ile Gln Gln Asn Leu Asp
      215      220      225
cag ctg cgc gaa gag ctc agc aga gcc ttt gca ggc act ggg act gag      821
Gln Leu Arg Glu Glu Leu Ser Arg Ala Phe Ala Gly Thr Gly Thr Glu
      230      235      240
gaa ggg gcc ggc ccg gac ccc cag atg ctc tcc gag gag gtg cgc cag      869
Glu Gly Ala Gly Pro Asp Pro Gln Met Leu Ser Glu Glu Val Arg Gln
      245      250      255      260
cga ctt cag gct ttc cgc cag gac acc tac ctg cag ata gct gcc ttc      917
Arg Leu Gln Ala Phe Arg Gln Asp Thr Tyr Leu Gln Ile Ala Ala Phe
      265      270      275
act cgc gcc atc gac cag gag act gag gag gtc cag cag cag ctg gcg      965
Thr Arg Ala Ile Asp Gln Glu Thr Glu Glu Val Gln Gln Gln Leu Ala
      280      285      290
cca cct cca cca ggc cac agt gcc ttc gcc cca gag ttt caa caa aca      1013
Pro Pro Pro Pro Gly His Ser Ala Phe Ala Pro Glu Phe Gln Gln Thr
      295      300      305
gac agt ggc aag gtt ctg agc aag ctg cag gcc cgt ctg gat gac ctg      1061
Asp Ser Gly Lys Val Leu Ser Lys Leu Gln Ala Arg Leu Asp Asp Leu
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Trp Glu Asp Ile Thr His Ser Leu His Asp Gln Gly His Ser His Leu
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Gly Asp Pro
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tgggagctcc ttaaaccctc tggggagcat actgtgtgct ctcccatct ccagccctc      1818

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 10 15 20 25
 Met Ala Arg Glu Pro Ala Thr Leu Lys Asp Ser Leu Glu Gln Asp Leu
 30 35 40
 Asn Asn Met Asn Lys Phe Leu Glu Lys Leu Arg Pro Leu Ser Gly Ser
 45 50 55
 Glu Ala Pro Arg Leu Pro Gln Asp Pro Val Gly Met Arg Arg Gln Leu
 60 65 70
 Gln Glu Glu Leu Glu Glu Val Lys Ala Arg Leu Gln Pro Tyr Met Ala
 75 80 85
 Glu Ala His Glu Leu Val Gly Trp Asn Leu Glu Gly Leu Arg Gln Gln
 90 95 100 105
 Leu Lys Pro Tyr Thr Met Asp Leu Met Glu Gln Val Ala Leu Arg Val
 110 115 120
 Gln Glu Leu Gln Glu Gln Leu Arg Val Val Gly Glu Asp Thr Lys Ala
 125 130 135
 Gln Leu Leu Gly Gly Val Asp Glu Ala Trp Ala Leu Leu Gln Gly Leu
 140 145 150
 Gln Ser Arg Val Val His His Thr Gly Arg Phe Lys Glu Leu Phe His
 155 160 165
 Pro Tyr Ala Glu Ser Leu Val Ser Gly Ile Gly Arg His Val Gln Glu
 170 175 180 185
 Leu His Arg Ser Val Ala Pro His Ala Pro Ala Ser Pro Ala Arg Leu
 190 195 200
 Ser Arg Cys Val Gln Val Leu Ser Arg Lys Leu Thr Leu Lys Ala Lys
 205 210 215
 Ala Leu His Ala Arg Ile Gln Gln Asn Leu Asp Gln Leu Arg Glu Glu
 220 225 230
 Leu Ser Arg Ala Phe Ala Gly Thr Gly Thr Glu Glu Gly Ala Gly Pro
 235 240 245
 Asp Pro Gln Met Leu Ser Glu Glu Val Arg Gln Arg Leu Gln Ala Phe
 250 255 260 265
 Arg Gln Asp Thr Tyr Leu Gln Ile Ala Ala Phe Thr Arg Ala Ile Asp
 270 275 280
 Gln Glu Thr Glu Glu Val Gln Gln Gln Leu Ala Pro Pro Pro Pro Gly
 285 290 295
 His Ser Ala Phe Ala Pro Glu Phe Gln Gln Thr Asp Ser Gly Lys Val
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 aatatttttttg tgactttcttc agaccactttt c atg act tct gga agc aaa tgt 52
 Met Thr Ser Gly Ser Lys Cys
 1 5
 cct agt aca gac tca gga aaa gaa gaa tat att gcc acg ttc aaa gga 100
 Pro Ser Thr Asp Ser Gly Lys Glu Glu Tyr Ile Ala Thr Phe Lys Gly
 10 15 20
 tct gaa tac ttc tgc tac gac ttg tct caa aac ccc att caa agc agc 148
 Ser Glu Tyr Phe Cys Tyr Asp Leu Ser Gln Asn Pro Ile Gln Ser Ser
 25 30 35
 agt gat gaa ata act ctg tca ttt aaa acc ctt cag agg aat gga ctg 196
 Ser Asp Glu Ile Thr Leu Ser Phe Lys Thr Leu Gln Arg Asn Gly Leu
 40 45 50 55
 atg ctt cac act ggg aaa tcg gct gat tat gtc aat ctt gcc ctg aaa 244
 Met Leu His Thr Gly Lys Ser Ala Asp Tyr Val Asn Leu Ala Leu Lys
 60 65 70
 aat gga gct gtc tct ctg gtc att aat ttg gga tca ggg gcc ttt gaa 292
 Asn Gly Ala Val Ser Leu Val Ile Asn Leu Gly Ser Gly Ala Phe Glu
 75 80 85
 gca cta gtg gag cct gtg aat gga aag ttt aat gat aat gcc tgg cat 340
 Ala Leu Val Glu Pro Val Asn Gly Lys Phe Asn Asp Asn Ala Trp His
 90 95 100
 gat gtg aaa gtc acc agg aat ctg cgt cag gtg aca ata tca gtg gat 388
 Asp Val Lys Val Thr Arg Asn Leu Arg Gln Val Thr Ile Ser Val Asp
 105 110 115

```

ggg att ctt acc aca acg ggc tac acg caa gaa gat tat acc atg ctg 436
Gly Ile Leu Thr Thr Thr Gly Tyr Thr Gln Glu Asp Tyr Thr Met Leu
120 125 130 135
ggg tct gat gac ttt ttc tat gtt gga ggc agt ccc agc aca gcc gac 484
Gly Ser Asp Asp Phe Phe Tyr Val Gly Gly Ser Pro Ser Thr Ala Asp
140 145 150
ctt cca ggg tca cca atc cag cat gaa agc acc ttt gct gaa gac ccg 532
Leu Pro Gly Ser Pro Ile Gln His Glu Ser Thr Phe Ala Glu Asp Pro
155 160 165
atg ttc cag agt caa acg gca caa ctt taaattcaat attctactat 579
Met Phe Gln Ser Gln Thr Ala Gln Leu
170 175
tgtttatgta ggattggggg agggaaacag ctcatagatc attatgaagg aattaggttc 639
ctcttcttta ttagtctgta agtaatttac atttgagatt tgtgtggaca gttgatatta 699
gctataaaaag aaagtcaaac aaaaagagaa aaaaaaaaaa aaa 742

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<210> 30
<211> 176
<212> PRT
<213> Homo sapiens

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<400> 30
Met Thr Ser Gly Ser Lys Cys Pro Ser Thr Asp Ser Gly Lys Glu Glu
1 5 10 15
Tyr Ile Ala Thr Phe Lys Gly Ser Glu Tyr Phe Cys Tyr Asp Leu Ser
20 25 30
Gln Asn Pro Ile Gln Ser Ser Ser Asp Glu Ile Thr Leu Ser Phe Lys
35 40 45
Thr Leu Gln Arg Asn Gly Leu Met Leu His Thr Gly Lys Ser Ala Asp
50 55 60
Tyr Val Asn Leu Ala Leu Lys Asn Gly Ala Val Ser Leu Val Ile Asn
65 70 75 80
Leu Gly Ser Gly Ala Phe Glu Ala Leu Val Glu Pro Val Asn Gly Lys
85 90 95
Phe Asn Asp Asn Ala Trp His Asp Val Lys Val Thr Arg Asn Leu Arg
100 105 110
Gln Val Thr Ile Ser Val Asp Gly Ile Leu Thr Thr Thr Gly Tyr Thr
115 120 125
Gln Glu Asp Tyr Thr Met Leu Gly Ser Asp Asp Phe Phe Tyr Val Gly
130 135 140
Gly Ser Pro Ser Thr Ala Asp Leu Pro Gly Ser Pro Ile Gln His Glu
145 150 155 160
Ser Thr Phe Ala Glu Asp Pro Met Phe Gln Ser Gln Thr Ala Gln Leu
165 170 175

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<210> 31
<211> 1766
<212> DNA
<213> Homo sapiens

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<220>
<221> 5'UTR
<222> 1..3

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<220>

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<221> CDS
<222> 4..1533

<220>
<221> 3'UTR
<222> 1534..1766

<220>
<221> polyA_signal
<222> 1709..1714

<220>
<221> polyA_site
<222> 1744..1766

<400> 31
aag atg gcg gcg gag ctg gtg gag gcc aaa aac atg gtg atg agt ttt 48
Met Ala Ala Glu Leu Val Glu Ala Lys Asn Met Val Met Ser Phe
1 5 10 15
cga gtc tcc gac ctt cag atg ctc ctg ggt ttc gtg ggc cgg agt aag 96
Arg Val Ser Asp Leu Gln Met Leu Leu Gly Phe Val Gly Arg Ser Lys
20 25 30
agt gga ctg aag cac gag ctc gtc acc agg gcc ctc cag ctg gtg cag 144
Ser Gly Leu Lys His Glu Leu Val Thr Arg Ala Leu Gln Leu Val Gln
35 40 45
ttt gac tgt acc cct gag ctg ttc aag aag atc aag gag ctg tac gag 192
Phe Asp Cys Thr Pro Glu Leu Phe Lys Lys Ile Lys Glu Leu Tyr Glu
50 55 60
acc cgc tac gcc aag aag aac tcg gag cct gcc cca cag ccg cac cgg 240
Thr Arg Tyr Ala Lys Lys Asn Ser Glu Pro Ala Pro Gln Pro His Arg
65 70 75
ccc ctg gac ccc ctg acc atg cac tcc acc tac gac cgg gcc ggc gct 288
Pro Leu Asp Pro Leu Thr Met His Ser Thr Tyr Asp Arg Ala Gly Ala
80 85 90 95
gtg ccc agg act ccg ctg gca ggc ccc aat att gac tac ccc gtg ctc 336
Val Pro Arg Thr Pro Leu Ala Gly Pro Asn Ile Asp Tyr Pro Val Leu
100 105 110
tac gga aag tac tta aac gga ctg gga cgg ttg ccc gcc aag acc ctc 384
Tyr Gly Lys Tyr Leu Asn Gly Leu Gly Arg Leu Pro Ala Lys Thr Leu
115 120 125
aag cca gaa gtc cgc ctg gtg aag ctg ccg ttc ttt aat atg ctg gac 432
Lys Pro Glu Val Arg Leu Val Lys Leu Pro Phe Phe Asn Met Leu Asp
130 135 140
gag ctg ctg aag ccc acc gaa tta gtc cca cag aac aac gag aag ctt 480
Glu Leu Leu Lys Pro Thr Glu Leu Val Pro Gln Asn Asn Glu Lys Leu
145 150 155
cag gag agc ccg tgc atc ttc gca ttg acg cca aga cag gtg gag ttg 528
Gln Glu Ser Pro Cys Ile Phe Ala Leu Thr Pro Arg Gln Val Glu Leu
160 165 170 175
atc cgg aac tcc agg gaa ctg cag ccc gga gtt aaa gcc gtg cag gtc 576
Ile Arg Asn Ser Arg Glu Leu Gln Pro Gly Val Lys Ala Val Gln Val
180 185 190
gtc ctg aga atc tgt tac tca gac acc agc tgc cct cag gag gac cag 624
Val Leu Arg Ile Cys Tyr Ser Asp Thr Ser Cys Pro Gln Glu Asp Gln
195 200 205

tac ccg ccc aac atc gct gtg aag gtc aac cac agc tac tgc tcc gtc	672
Tyr Pro Pro Asn Ile Ala Val Lys Val Asn His Ser Tyr Cys Ser Val	
210 215 220	
ccg ggc tac tac ccc tcc aat aag ccc ggg gtg gag ccc aag agg ccg	720
Pro Gly Tyr Tyr Pro Ser Asn Lys Pro Gly Val Glu Pro Lys Arg Pro	
225 230 235	
tgc cgc ccc atc aac ctc acc cac ctc atg tac ctt tcc tcg gcc acc	768
Cys Arg Pro Ile Asn Leu Thr His Leu Met Tyr Leu Ser Ser Ala Thr	
240 245 250 255	
aac cgc atc act gtc acc tgg ggg aac tac ggc aag agc tac tcg gtg	816
Asn Arg Ile Thr Val Thr Trp Gly Asn Tyr Gly Lys Ser Tyr Ser Val	
260 265 270	
gcc ctg tac ctg gtg cgg cag ctg acc tca tcg gag ctg ctg cag agg	864
Ala Leu Tyr Leu Val Arg Gln Leu Thr Ser Ser Glu Leu Leu Gln Arg	
275 280 285	
ctg aag acc att ggg gta aag cac ccg gag ctg tgc aag gca ctg gtc	912
Leu Lys Thr Ile Gly Val Lys His Pro Glu Leu Cys Lys Ala Leu Val	
290 295 300	
aag gag aag ctg cgc ctt gat cct gac agc gag atc gcc acc acc ggt	960
Lys Glu Lys Leu Arg Leu Asp Pro Asp Ser Glu Ile Ala Thr Thr Gly	
305 310 315	
gtg cgg gtg tcc ctc atc tgt ccg ctg gtg aag atg cgg ctc tcc gtg	1008
Val Arg Val Ser Leu Ile Cys Pro Leu Val Lys Met Arg Leu Ser Val	
320 325 330 335	
ccc tgc cgg gca gag acc tgc gcc cac ctg cag tgc ttc gac gcc gtc	1056
Pro Cys Arg Ala Glu Thr Cys Ala His Leu Gln Cys Phe Asp Ala Val	
340 345 350	
ttc tac ctg cag atg aac gag aag aag ccc acc tgg atg tgc ccc gtg	1104
Phe Tyr Leu Gln Met Asn Glu Lys Lys Pro Thr Trp Met Cys Pro Val	
355 360 365	
tgc gac aag cca gcc ccc tac gac cag ctc atc atc gac ggg ctc ctc	1152
Cys Asp Lys Pro Ala Pro Tyr Asp Gln Leu Ile Ile Asp Gly Leu Leu	
370 375 380	
tcg aag atc ctg agc gag tgt gag gac gcc gac gag atc gag tac ctg	1200
Ser Lys Ile Leu Ser Glu Cys Glu Asp Ala Asp Glu Ile Glu Tyr Leu	
385 390 395	
gtg gac ggc tcg tgg tgc ccg atc cgc gcc gaa aag gag ctc agc tgc	1248
Val Asp Gly Ser Trp Cys Pro Ile Arg Ala Glu Lys Glu Leu Ser Cys	
400 405 410 415	
agc ccg cag ggc gcc atc ctc gtg ctg ggc ccc tcg gac gcc aat ggg	1296
Ser Pro Gln Gly Ala Ile Leu Val Leu Gly Pro Ser Asp Ala Asn Gly	
420 425 430	
ctc ctg ccc gcc ccc agc gtc aac ggg agc ggt gcc ctg ggc agc acg	1344
Leu Leu Pro Ala Pro Ser Val Asn Gly Ser Gly Ala Leu Gly Ser Thr	
435 440 445	
ggt ggc ggc ggc ccg gtg ggc agc atg gag aat ggg aag ccg ggc gcc	1392
Gly Gly Gly Gly Pro Val Gly Ser Met Glu Asn Gly Lys Pro Gly Ala	
450 455 460	
gat gtg gtg gac ctc acg ctg gac agc tca tcg tcc tcg gag gat gag	1440
Asp Val Val Asp Leu Thr Leu Asp Ser Ser Ser Ser Glu Asp Glu	
465 470 475	
gag gag gag gaa gag gag gag gaa gac gag gac gaa gag ggg ccc ccg	1488
Glu Glu Glu Glu Glu Glu Glu Glu Asp Glu Asp Glu Glu Gly Pro Arg	
480 485 490 495	
ccc aag cgc cgc tgc ccc ttc cag aag ggc ctg gtg ccg gcc tgc	1533

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Pro Lys Arg Arg Cys Pro Phe Gln Lys Gly Leu Val Pro Ala Cys
      500                      505                      510
tgaccccggc cgcacacttg actttcctgg tgctcaccac gcagaggggc acggggccagc 1593
ctcggggcgca gagggaggag tgacctttct ttttcctttt attgtcgttc gttttgtttt 1653
tccacccttt tgcctggctc ctggcacctg tacctctgga ctctcctatc gggggattaa 1713
aaaaaaaaagt aaaatgacaa aaaaagatac aaaaaagaaa aaaaaaaaaa aaa 1766

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<210> 32
<211> 510
<212> PRT
<213> Homo sapiens

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<400> 32
Met Ala Ala Glu Leu Val Glu Ala Lys Asn Met Val Met Ser Phe Arg
1      5      10      15
Val Ser Asp Leu Gln Met Leu Leu Gly Phe Val Gly Arg Ser Lys Ser
      20      25      30
Gly Leu Lys His Glu Leu Val Thr Arg Ala Leu Gln Leu Val Gln Phe
      35      40      45
Asp Cys Thr Pro Glu Leu Phe Lys Lys Ile Lys Glu Leu Tyr Glu Thr
      50      55      60
Arg Tyr Ala Lys Lys Asn Ser Glu Pro Ala Pro Gln Pro His Arg Pro
      65      70      75      80
Leu Asp Pro Leu Thr Met His Ser Thr Tyr Asp Arg Ala Gly Ala Val
      85      90      95
Pro Arg Thr Pro Leu Ala Gly Pro Asn Ile Asp Tyr Pro Val Leu Tyr
      100     105     110
Gly Lys Tyr Leu Asn Gly Leu Gly Arg Leu Pro Ala Lys Thr Leu Lys
      115     120     125
Pro Glu Val Arg Leu Val Lys Leu Pro Phe Phe Asn Met Leu Asp Glu
      130     135     140
Leu Leu Lys Pro Thr Glu Leu Val Pro Gln Asn Asn Glu Lys Leu Gln
      145     150     155     160
Glu Ser Pro Cys Ile Phe Ala Leu Thr Pro Arg Gln Val Glu Leu Ile
      165     170     175
Arg Asn Ser Arg Glu Leu Gln Pro Gly Val Lys Ala Val Gln Val Val
      180     185     190
Leu Arg Ile Cys Tyr Ser Asp Thr Ser Cys Pro Gln Glu Asp Gln Tyr
      195     200     205
Pro Pro Asn Ile Ala Val Lys Val Asn His Ser Tyr Cys Ser Val Pro
      210     215     220
Gly Tyr Tyr Pro Ser Asn Lys Pro Gly Val Glu Pro Lys Arg Pro Cys
      225     230     235     240
Arg Pro Ile Asn Leu Thr His Leu Met Tyr Leu Ser Ser Ala Thr Asn
      245     250     255
Arg Ile Thr Val Thr Trp Gly Asn Tyr Gly Lys Ser Tyr Ser Val Ala
      260     265     270
Leu Tyr Leu Val Arg Gln Leu Thr Ser Ser Glu Leu Leu Gln Arg Leu
      275     280     285
Lys Thr Ile Gly Val Lys His Pro Glu Leu Cys Lys Ala Leu Val Lys
      290     295     300
Glu Lys Leu Arg Leu Asp Pro Asp Ser Glu Ile Ala Thr Thr Gly Val
      305     310     315     320
Arg Val Ser Leu Ile Cys Pro Leu Val Lys Met Arg Leu Ser Val Pro
      325     330     335

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Cys Arg Ala Glu Thr Cys Ala His Leu Gln Cys Phe Asp Ala Val Phe
      340                      345                      350
Tyr Leu Gln Met Asn Glu Lys Lys Pro Thr Trp Met Cys Pro Val Cys
      355                      360                      365
Asp Lys Pro Ala Pro Tyr Asp Gln Leu Ile Ile Asp Gly Leu Leu Ser
      370                      375                      380
Lys Ile Leu Ser Glu Cys Glu Asp Ala Asp Glu Ile Glu Tyr Leu Val
      385                      390                      395                      400
Asp Gly Ser Trp Cys Pro Ile Arg Ala Glu Lys Glu Leu Ser Cys Ser
      405                      410                      415
Pro Gln Gly Ala Ile Leu Val Leu Gly Pro Ser Asp Ala Asn Gly Leu
      420                      425                      430
Leu Pro Ala Pro Ser Val Asn Gly Ser Gly Ala Leu Gly Ser Thr Gly
      435                      440                      445
Gly Gly Gly Pro Val Gly Ser Met Glu Asn Gly Lys Pro Gly Ala Asp
      450                      455                      460
Val Val Asp Leu Thr Leu Asp Ser Ser Ser Ser Ser Glu Asp Glu Glu
      465                      470                      475                      480
Glu Glu Glu Glu Glu Glu Glu Asp Glu Asp Glu Glu Gly Pro Arg Pro
      485                      490                      495
Lys Arg Arg Cys Pro Phe Gln Lys Gly Leu Val Pro Ala Cys
      500                      505                      510

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<210> 33
<211> 877
<212> DNA
<213> Homo sapiens

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<220>
<221> 5'UTR
<222> 1..10

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<220>
<221> CDS
<222> 11..802

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<220>
<221> 3'UTR
<222> 803..877

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<220>
<221> polyA_signal
<222> 836..841

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<220>
<221> polyA_site
<222> 862..877

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<400> 33
atctgccacg atg ttg ctg ctc agc ctg acc cta agc ctg gtt ctc ctc      49
      Met Leu Leu Leu Ser Leu Thr Leu Ser Leu Val Leu Leu
      -15                      -10
ggc tcc tcc tgg ggc tgc ggc att cct gcc atc aaa ccg gca ctg agc      97
Gly Ser Ser Trp Gly Cys Gly Ile Pro Ala Ile Lys Pro Ala Leu Ser
-5                      1                      5                      10

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ttc agc cag agg att gtc aac ggg gag aat gca gtg ttg ggc tcc tgg 145
Phe Ser Gln Arg Ile Val Asn Gly Glu Asn Ala Val Leu Gly Ser Trp
      15      20      25
ccc tgg cag gtg tcc ctg cag gac agc agc gac ttc cac ttc tgc ggt 193
Pro Trp Gln Val Ser Leu Gln Asp Ser Ser Asp Phe His Phe Cys Gly
      30      35      40
ggg tct ctc atc agc cag tcc tgg gtg gtc act gct gcc cac tgc aat 241
Gly Ser Leu Ile Ser Gln Ser Trp Val Val Thr Ala Ala His Cys Asn
      45      50      55
gtc agc cct ggc cgc cat ttt gtt gtc ctg ggc gag tat gac cga tca 289
Val Ser Pro Gly Arg His Phe Val Val Leu Gly Glu Tyr Asp Arg Ser
      60      65      70      75
tca aac gca gag ccc ttg cag gtt ctg tcc gtc tct cgg gcc att aca 337
Ser Asn Ala Glu Pro Leu Gln Val Leu Ser Val Ser Arg Ala Ile Thr
      80      85      90
cac cct agc tgg aac tct acc acc atg aac aat gac gtg acg ctg ctg 385
His Pro Ser Trp Asn Ser Thr Thr Met Asn Asn Asp Val Thr Leu Leu
      95      100      105
aag ctc gcc tcg cca gcc cag tac aca aca cgc atc tcg cca gtt tgc 433
Lys Leu Ala Ser Pro Ala Gln Tyr Thr Thr Arg Ile Ser Pro Val Cys
      110      115      120
ctg gca tcc tca aac gag gct ctg act gaa ggc ctc acg tgt gtc acc 481
Leu Ala Ser Ser Asn Glu Ala Leu Thr Glu Gly Leu Thr Cys Val Thr
      125      130      135
acc ggc tgg ggt cgc ctc agt ggc gtg ggc aat gtg aca cca gca cgt 529
Thr Gly Trp Gly Arg Leu Ser Gly Val Gly Asn Val Thr Pro Ala Arg
      140      145      150      155
ctg cag cag gtg gct ttg ccc ctg gtc act gtg aat cag tgc cgg cag 577
Leu Gln Gln Val Ala Leu Pro Leu Val Thr Val Asn Gln Cys Arg Gln
      160      165      170
tac tgg ggc tca agt atc act gac tcc atg atc tgt gca ggt ggc gca 625
Tyr Trp Gly Ser Ser Ile Thr Asp Ser Met Ile Cys Ala Gly Gly Ala
      175      180      185
ggg gcc tcc tcg tgc cag ggt gac tcc gga ggc cct ctt gtc tgc cag 673
Gly Ala Ser Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Gln
      190      195      200
aag gga aac aca tgg gtg ctt att ggt att gtc tcc tgg ggc acc aaa 721
Lys Gly Asn Thr Trp Val Leu Ile Gly Ile Val Ser Trp Gly Thr Lys
      205      210      215
aac tgc aat gtg cgc gca cct gct gtg tat act cga gtt agc aag ttc 769
Asn Cys Asn Val Arg Ala Pro Ala Val Tyr Thr Arg Val Ser Lys Phe
      220      225      230      235
agc acc tgg atc aac cag gtc ata gcc tac aac tgagctcacc acaggccctc 822
Ser Thr Trp Ile Asn Gln Val Ile Ala Tyr Asn
      240      245
cccagctcaa cccattaaag acccaggccc tgtcccatca aaaaaaaaaa aaaaa 877

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<210> 34
<211> 264
<212> PRT
<213> Homo sapiens

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<220>
<221> SIGNAL
<222> 1..18

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<400> 34

Met	Leu	Leu	Leu	Ser	Leu	Thr	Leu	Ser	Leu	Val	Leu	Leu	Gly	Ser	Ser
			-15					-10					-5		
Trp	Gly	Cys	Gly	Ile	Pro	Ala	Ile	Lys	Pro	Ala	Leu	Ser	Phe	Ser	Gln
	1					5					10				
Arg	Ile	Val	Asn	Gly	Glu	Asn	Ala	Val	Leu	Gly	Ser	Trp	Pro	Trp	Gln
15					20					25					30
Val	Ser	Leu	Gln	Asp	Ser	Ser	Asp	Phe	His	Phe	Cys	Gly	Gly	Ser	Leu
				35					40					45	
Ile	Ser	Gln	Ser	Trp	Val	Val	Thr	Ala	Ala	His	Cys	Asn	Val	Ser	Pro
			50					55					60		
Gly	Arg	His	Phe	Val	Val	Leu	Gly	Glu	Tyr	Asp	Arg	Ser	Ser	Asn	Ala
	65						70					75			
Glu	Pro	Leu	Gln	Val	Leu	Ser	Val	Ser	Arg	Ala	Ile	Thr	His	Pro	Ser
	80					85						90			
Trp	Asn	Ser	Thr	Thr	Met	Asn	Asn	Asp	Val	Thr	Leu	Leu	Lys	Leu	Ala
95					100					105					110
Ser	Pro	Ala	Gln	Tyr	Thr	Thr	Arg	Ile	Ser	Pro	Val	Cys	Leu	Ala	Ser
				115					120					125	
Ser	Asn	Glu	Ala	Leu	Thr	Glu	Gly	Leu	Thr	Cys	Val	Thr	Thr	Gly	Trp
			130					135					140		
Gly	Arg	Leu	Ser	Gly	Val	Gly	Asn	Val	Thr	Pro	Ala	Arg	Leu	Gln	Gln
		145					150					155			
Val	Ala	Leu	Pro	Leu	Val	Thr	Val	Asn	Gln	Cys	Arg	Gln	Tyr	Trp	Gly
	160					165					170				
Ser	Ser	Ile	Thr	Asp	Ser	Met	Ile	Cys	Ala	Gly	Gly	Ala	Gly	Ala	Ser
175					180					185					190
Ser	Cys	Gln	Gly	Asp	Ser	Gly	Gly	Pro	Leu	Val	Cys	Gln	Lys	Gly	Asn
				195					200					205	
Thr	Trp	Val	Leu	Ile	Gly	Ile	Val	Ser	Trp	Gly	Thr	Lys	Asn	Cys	Asn
		210						215					220		
Val	Arg	Ala	Pro	Ala	Val	Tyr	Thr	Arg	Val	Ser	Lys	Phe	Ser	Thr	Trp
		225					230					235			
Ile	Asn	Gln	Val	Ile	Ala	Tyr	Asn								
	240					245									

<210> 35

<211> 1728

<212> DNA

<213> Homo sapiens

<220>

<221> 5'UTR

<222> 1..37

<220>

<221> CDS

<222> 38..1378

<220>

<221> 3'UTR

<222> 1379..1728

<220>

<221> polyA_site

<222> 1713..1728

<400> 35

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atcatctgca cagctggggc ccctgggagg agacgcc atg atc ccc acc ttc acg      55
                                Met Ile Pro Thr Phe Thr
                                -20
gct ctg ctc tgc ctc ggg ctg agt ctg ggc ccc agg acc cac atg cag      103
Ala Leu Leu Cys Leu Gly Leu Ser Leu Gly Pro Arg Thr His Met Gln
                                -15                                -10                                -5
gca ggg ccc ctc ccc aaa ccc acc ctc tgg gct gag cca ggc tct gtg      151
Ala Gly Pro Leu Pro Lys Pro Thr Leu Trp Ala Glu Pro Gly Ser Val
    1                                5                                10                                15
atc agc tgg ggg aac tct gtg acc atc tgg tgt cag ggg acc ctg gag      199
Ile Ser Trp Gly Asn Ser Val Thr Ile Trp Cys Gln Gly Thr Leu Glu
                                20                                25                                30
gct cgg gag tac cgt ctg gat aaa gag gaa agc cca gca ccc tgg gac      247
Ala Arg Glu Tyr Arg Leu Asp Lys Glu Glu Ser Pro Ala Pro Trp Asp
                                35                                40                                45
aga cag aac cca ctg gag ccc aag aac aag gcc aga ttc tcc atc cca      295
Arg Gln Asn Pro Leu Glu Pro Lys Asn Lys Ala Arg Phe Ser Ile Pro
                                50                                55                                60
tcc atg aca gag gac tat gca ggg aga tac cgc tgt tac tat cgc agc      343
Ser Met Thr Glu Asp Tyr Ala Gly Arg Tyr Arg Cys Tyr Tyr Arg Ser
    65                                70                                75
cct gta ggc tgg tca cag ccc agt gac ccc ctg gag ctg gtg atg aca      391
Pro Val Gly Trp Ser Gln Pro Ser Asp Pro Leu Glu Leu Val Met Thr
    80                                85                                90                                95
gga gcc tac agt aaa ccc acc ctt tca gcc ctg ccg agt cct ctt gtg      439
Gly Ala Tyr Ser Lys Pro Thr Leu Ser Ala Leu Pro Ser Pro Leu Val
                                100                                105                                110
acc tca gaa aag agc gtg acc ctg ctg tgt cag tca cgg agc cca atg      487
Thr Ser Glu Lys Ser Val Thr Leu Leu Cys Gln Ser Arg Ser Pro Met
                                115                                120                                125
gac act ttc ctt ctg atc aag gag cgg gca gcc cat ccc cta ctg cat      535
Asp Thr Phe Leu Leu Ile Lys Glu Arg Ala Ala His Pro Leu Leu His
                                130                                135                                140
ctg aga tca gag cac gga gct cag cag cac cag gct gaa ttc ccc atg      583
Leu Arg Ser Glu His Gly Ala Gln Gln His Gln Ala Glu Phe Pro Met
    145                                150                                155
agt cct gtg acc tca gtg cac ggg ggg acc tac agg tgc ttc agc tca      631
Ser Pro Val Thr Ser Val His Gly Gly Thr Tyr Arg Cys Phe Ser Ser
    160                                165                                170                                175
cac ggc ttc tcc cac tac ctg ctg tca cac ccc agt gac ccc ctg gag      679
His Gly Phe Ser His Tyr Leu Leu Ser His Pro Ser Asp Pro Leu Glu
                                180                                185                                190
ctc ata gtc tca gga tcc ttg gag gat ccc agg ccc tca ccc aca agg      727
Leu Ile Val Ser Gly Ser Leu Glu Asp Pro Arg Pro Ser Pro Thr Arg
                                195                                200                                205
tcc gtc tca aca gct gca ggc cct gag gac cag ccc ctc atg cct aca      775
Ser Val Ser Thr Ala Ala Gly Pro Glu Asp Gln Pro Leu Met Pro Thr
    210                                215                                220
ggg tca gtc ccc cac agt ggt ctg aga agg cac tgg gag gta ctg atc      823
Gly Ser Val Pro His Ser Gly Leu Arg Arg His Trp Glu Val Leu Ile
    225                                230                                235

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ggg gtc ttg gtg gtc tcc atc ctg ctt ctc tcc ctc ctc ctc ttc ctc 871
Gly Val Leu Val Val Ser Ile Leu Leu Leu Ser Leu Leu Leu Phe Leu
240                245                250                255
ctc ctc caa cac tgg cgt cag gga aaa cac agg aca ttg gcc cag aga 919
Leu Leu Gln His Trp Arg Gln Gly Lys His Arg Thr Leu Ala Gln Arg
                260                265                270
cag gct gat ttc caa cgt cct cca ggg gct gcc gag cca gag ccc aag 967
Gln Ala Asp Phe Gln Arg Pro Pro Gly Ala Ala Glu Pro Glu Pro Lys
                275                280                285
gac ggg ggc cta cag agg agg tcc agc cca gct gct gac gtc cag gga 1015
Asp Gly Gly Leu Gln Arg Arg Ser Ser Pro Ala Ala Asp Val Gln Gly
                290                295                300
gaa aac ttc tgt gct gcc gtg aag gac aca cag cct gag gac ggg gtg 1063
Glu Asn Phe Cys Ala Ala Val Lys Asp Thr Gln Pro Glu Asp Gly Val
                305                310                315
gaa atg gac act cgg agc cca cac gat gaa gac ccc cag gca gtg acg 1111
Glu Met Asp Thr Arg Ser Pro His Asp Glu Asp Pro Gln Ala Val Thr
320                325                330                335
tat gcc aag gtg aaa cac tcc aga cct agg aga gaa atg gcc tct cct 1159
Tyr Ala Lys Val Lys His Ser Arg Pro Arg Arg Glu Met Ala Ser Pro
                340                345                350
ccc tcc cca ctg tct ggg gaa ttc ctg gac aca aag gac aga cag gca 1207
Pro Ser Pro Leu Ser Gly Glu Phe Leu Asp Thr Lys Asp Arg Gln Ala
                355                360                365
gaa gag gac aga cag atg gac act gag gct gct gca tct gaa gcc ccc 1255
Glu Glu Asp Arg Gln Met Asp Thr Glu Ala Ala Ala Ser Glu Ala Pro
                370                375                380
cag gat gtg acc tac gcc cag ctg cac agc ttt acc ctc aga cag aag 1303
Gln Asp Val Thr Tyr Ala Gln Leu His Ser Phe Thr Leu Arg Gln Lys
                385                390                395
gca act gag cct cct cca tcc cag gaa ggg gcc tct cca gct gag ccc 1351
Ala Thr Glu Pro Pro Pro Ser Gln Glu Gly Ala Ser Pro Ala Glu Pro
400                405                410                415
agt gtc tat gcc act ctg gcc atc cac taatccaggg gggacccaga 1398
Ser Val Tyr Ala Thr Leu Ala Ile His
                420
ccccacaagc catggagact caggacccca gaaggcatgg aagctgcctc cagtagacat 1458
cactgaaccc cagccagccc agaccctga cacagaccac tagaagattc cggaacggtt 1518
gggagtcacc tgattctgca aagataaata atatccctgc attatcaaaa taaagtagca 1578
gacctctcaa ttcacaatga gttaactgat aaaacaaaac agaagtcaga caatgtttta 1638
aattgaatga tcatgtaaatt attacacatc aaaccaatga catgggaaaa tgggagcttc 1698
taatgaggac aaacaaaaaa aaaaaaaaaa 1728

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<210> 36
 <211> 447
 <212> PRT
 <213> Homo sapiens

<220>
 <221> SIGNAL
 <222> 1..23

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		-5					1				5				
Ala	Glu	Pro	Gly	Ser	Val	Ile	Ser	Trp	Gly	Asn	Ser	Val	Thr	Ile	Trp
10					15					20					25
Cys	Gln	Gly	Thr	Leu	Glu	Ala	Arg	Glu	Tyr	Arg	Leu	Asp	Lys	Glu	Glu
				30				35						40	
Ser	Pro	Ala	Pro	Trp	Asp	Arg	Gln	Asn	Pro	Leu	Glu	Pro	Lys	Asn	Lys
			45					50					55		
Ala	Arg	Phe	Ser	Ile	Pro	Ser	Met	Thr	Glu	Asp	Tyr	Ala	Gly	Arg	Tyr
		60					65					70			
Arg	Cys	Tyr	Tyr	Arg	Ser	Pro	Val	Gly	Trp	Ser	Gln	Pro	Ser	Asp	Pro
	75					80					85				
Leu	Glu	Leu	Val	Met	Thr	Gly	Ala	Tyr	Ser	Lys	Pro	Thr	Leu	Ser	Ala
90					95					100					105
Leu	Pro	Ser	Pro	Leu	Val	Thr	Ser	Glu	Lys	Ser	Val	Thr	Leu	Leu	Cys
				110					115					120	
Gln	Ser	Arg	Ser	Pro	Met	Asp	Thr	Phe	Leu	Leu	Ile	Lys	Glu	Arg	Ala
			125					130					135		
Ala	His	Pro	Leu	Leu	His	Leu	Arg	Ser	Glu	His	Gly	Ala	Gln	Gln	His
		140					145					150			
Gln	Ala	Glu	Phe	Pro	Met	Ser	Pro	Val	Thr	Ser	Val	His	Gly	Gly	Thr
	155					160					165				
Tyr	Arg	Cys	Phe	Ser	Ser	His	Gly	Phe	Ser	His	Tyr	Leu	Leu	Ser	His
170					175					180					185
Pro	Ser	Asp	Pro	Leu	Glu	Leu	Ile	Val	Ser	Gly	Ser	Leu	Glu	Asp	Pro
				190					195					200	
Arg	Pro	Ser	Pro	Thr	Arg	Ser	Val	Ser	Thr	Ala	Ala	Gly	Pro	Glu	Asp
			205					210					215		
Gln	Pro	Leu	Met	Pro	Thr	Gly	Ser	Val	Pro	His	Ser	Gly	Leu	Arg	Arg
		220					225					230			
His	Trp	Glu	Val	Leu	Ile	Gly	Val	Leu	Val	Val	Ser	Ile	Leu	Leu	Leu
	235					240					245				
Ser	Leu	Leu	Leu	Phe	Leu	Leu	Leu	Gln	His	Trp	Arg	Gln	Gly	Lys	His
250					255					260					265
Arg	Thr	Leu	Ala	Gln	Arg	Gln	Ala	Asp	Phe	Gln	Arg	Pro	Pro	Gly	Ala
				270					275					280	
Ala	Glu	Pro	Glu	Pro	Lys	Asp	Gly	Gly	Leu	Gln	Arg	Arg	Ser	Ser	Pro
			285					290					295		
Ala	Ala	Asp	Val	Gln	Gly	Glu	Asn	Phe	Cys	Ala	Ala	Val	Lys	Asp	Thr
		300					305					310			
Gln	Pro	Glu	Asp	Gly	Val	Glu	Met	Asp	Thr	Arg	Ser	Pro	His	Asp	Glu
	315					320					325				
Asp	Pro	Gln	Ala	Val	Thr	Tyr	Ala	Lys	Val	Lys	His	Ser	Arg	Pro	Arg
330					335					340					345
Arg	Glu	Met	Ala	Ser	Pro	Pro	Ser	Pro	Leu	Ser	Gly	Glu	Phe	Leu	Asp
				350					355					360	
Thr	Lys	Asp	Arg	Gln	Ala	Glu	Glu	Asp	Arg	Gln	Met	Asp	Thr	Glu	Ala
			365					370					375		
Ala	Ala	Ser	Glu	Ala	Pro	Gln	Asp	Val	Thr	Tyr	Ala	Gln	Leu	His	Ser
		380					385					390			
Phe	Thr	Leu	Arg	Gln	Lys	Ala	Thr	Glu	Pro	Pro	Pro	Ser	Gln	Glu	Gly
	395					400						405			
Ala	Ser	Pro	Ala	Glu	Pro	Ser	Val	Tyr	Ala	Thr	Leu	Ala	Ile	His	
410					415										420

<210> 37
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 <213> Homo sapiens

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 <222> 1..329

<220>
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<220>
 <221> 3'UTR
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 <222> 1722..1727

<220>
 <221> polyA_site
 <222> 1742..1757

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 gctcgagggg caagggggct cgggtgtgtt acaccaggca cgggctacga gcgtccatcc 120
 cggcccctgg cttgcgctcc cgaagaggag agcaaggctg ttctgggata cggccgctcg 180
 gcggcaagag gcttgtctgt ccgggttgcc ggaaccagga gaaccagag ggaaaccgag 240
 gcaaaggagc ggcgcgtttt actagagaga gcgcgagcgg aagaggcgag agcaggagcg 300
 cgcgagggag catcgagcgc agcggagac atg agg acc tac tgg ctg cac agc 353
 Met Arg Thr Tyr Trp Leu His Ser
 -20
 gtc tgg gtg ctg ggc ttt ttc ctg tcc ctc ttc tca ttg caa gga ctg 401
 Val Trp Val Leu Gly Phe Phe Leu Ser Leu Phe Ser Leu Gln Gly Leu
 -15 -10 -5 1
 cct gtt cgc agc gtg gat ttt aac cga ggc acg gac aac atc acc gtg 449
 Pro Val Arg Ser Val Asp Phe Asn Arg Gly Thr Asp Asn Ile Thr Val
 5 10 15
 agg cag ggg gac aca gcc atc ctc agg tgc gtt gta gaa gac aag aac 497
 Arg Gln Gly Asp Thr Ala Ile Leu Arg Cys Val Val Glu Asp Lys Asn
 20 25 30
 tca aag gtg gcc tgg ttg aac cgt tct ggc atc att ttt gct gga cat 545
 Ser Lys Val Ala Trp Leu Asn Arg Ser Gly Ile Ile Phe Ala Gly His
 35 40 45
 gac aag tgg tct ctg gac cca cgg gtt gag ctg gag aaa cgc cat tct 593
 Asp Lys Trp Ser Leu Asp Pro Arg Val Glu Leu Glu Lys Arg His Ser
 50 55 60 65
 ctg gaa tac agc ctc cga atc cag aag gtg gat gtc tat gat gag ggt 641
 Leu Glu Tyr Ser Leu Arg Ile Gln Lys Val Asp Val Tyr Asp Glu Gly
 70 75 80
 tcc tac act tgc tca gtt cag aca cag cat gag ccc aag acc tcc caa 689
 Ser Tyr Thr Cys Ser Val Gln Thr Gln His Glu Pro Lys Thr Ser Gln
 85 90 95

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gtt tac ttg atc gta caa gtc cca cca aag atc tcc aat atc tcc tcg      737
Val Tyr Leu Ile Val Gln Val Pro Pro Lys Ile Ser Asn Ile Ser Ser
      100                      105                      110
gat gtc act gtg aat gag ggc agc aac gtg act ctg gtc tgc atg gcc      785
Asp Val Thr Val Asn Glu Gly Ser Asn Val Thr Leu Val Cys Met Ala
      115                      120                      125
aat ggc cgt cct gaa cct gtt atc acc tgg aga cac ctt aca cca act      833
Asn Gly Arg Pro Glu Pro Val Ile Thr Trp Arg His Leu Thr Pro Thr
      130                      135                      140                      145
gga agg gaa ttt gaa gga gaa gaa gaa tat ctg gag atc ctt ggc atc      881
Gly Arg Glu Phe Glu Gly Glu Glu Glu Tyr Leu Glu Ile Leu Gly Ile
      150                      155                      160
acc agg gag cag tca ggc aaa tat gag tgc aaa gct gcc aac gag gtc      929
Thr Arg Glu Gln Ser Gly Lys Tyr Glu Cys Lys Ala Ala Asn Glu Val
      165                      170                      175
tcc tcg gcg gat gtc aaa caa gtc aag gtc act gtg aac tat cct ccc      977
Ser Ser Ala Asp Val Lys Gln Val Lys Val Thr Val Asn Tyr Pro Pro
      180                      185                      190
act atc aca gaa tcc aag agc aat gaa gcc acc aca gga cga caa gct      1025
Thr Ile Thr Glu Ser Lys Ser Asn Glu Ala Thr Thr Gly Arg Gln Ala
      195                      200                      205
tca ctc aaa tgt gag gcc tcg gca gtg cct gca cct gac ttt gag tgg      1073
Ser Leu Lys Cys Glu Ala Ser Ala Val Pro Ala Pro Asp Phe Glu Trp
      210                      215                      220                      225
tac cgg gat gac act agg ata aat agt gcc aat ggc ctt gag att aag      1121
Tyr Arg Asp Asp Thr Arg Ile Asn Ser Ala Asn Gly Leu Glu Ile Lys
      230                      235                      240
agc acg gag ggc cag tct tcc ctg acg gtg acc aac gtc act gag gag      1169
Ser Thr Glu Gly Gln Ser Ser Leu Thr Val Thr Asn Val Thr Glu Glu
      245                      250                      255
cac tac ggc aac tac acc tgt gtg gct gcc aac aag ctg ggg gtc acc      1217
His Tyr Gly Asn Tyr Thr Cys Val Ala Ala Asn Lys Leu Gly Val Thr
      260                      265                      270
aat gcc agc cta gtc ctt ttc aaa cgt gtt tta ccc aca atc ccc cac      1265
Asn Ala Ser Leu Val Leu Phe Lys Arg Val Leu Pro Thr Ile Pro His
      275                      280                      285
ccc att caa gaa att ggt acc acc gtg cac ttc aag caa aaa ggc atc      1313
Pro Ile Gln Glu Ile Gly Thr Thr Val His Phe Lys Gln Lys Gly Ile
      290                      295                      300                      305
ttc ctc tct gag tct cag agg ggt gag aca acc aag atc act ctc aac      1361
Phe Leu Ser Glu Ser Gln Arg Gly Glu Thr Thr Lys Ile Thr Leu Asn
      310                      315                      320
tgt gga aat cta ttc ttg cgg aac tta cat ccc acc agt gat caa gag      1409
Cys Gly Asn Leu Phe Leu Arg Asn Leu His Pro Thr Ser Asp Gln Glu
      325                      330                      335
cca cag aga tta tgg aca ctt tgt tgc tta ctc cca aga aag ggc cag      1457
Pro Gln Arg Leu Trp Thr Leu Cys Cys Leu Leu Pro Arg Lys Gly Gln
      340                      345                      350
cac cgt att tat ggc cag tgc tagaagggtcc tcaactgaagg caacagggaa      1508
His Arg Ile Tyr Gly Gln Cys
      355                      360
gaggcagcca tgaatatata cttggaaaca ggatcatttg aggccttcaa gaaggcataa 1568
aatattgtcc ctttcagcct ttcttttctt ctcaatgccca cgattaccaa ttatgtttta 1628
atcttaagtg gctagtgtta tatgtgatac attatgcctt tgatatgtgg ttgaaaaaat 1688
aaggcatagc attgtttttt atttcaaaga caaaataaac tgccagtgtc accaaaaaaa 1748

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1757

<210> 38
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 <212> PRT
 <213> Homo sapiens

<220>
 <221> SIGNAL
 <222> 1..23

<400> 38

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Ser	Leu	Phe	Ser	Leu	Gln	Gly	Leu	Pro	Val	Arg	Ser	Val	Asp	Phe	Asn
	-5						1				5				
Arg	Gly	Thr	Asp	Asn	Ile	Thr	Val	Arg	Gln	Gly	Asp	Thr	Ala	Ile	Leu
10					15					20					25
Arg	Cys	Val	Val	Glu	Asp	Lys	Asn	Ser	Lys	Val	Ala	Trp	Leu	Asn	Arg
				30					35					40	
Ser	Gly	Ile	Ile	Phe	Ala	Gly	His	Asp	Lys	Trp	Ser	Leu	Asp	Pro	Arg
		45						50					55		
Val	Glu	Leu	Glu	Lys	Arg	His	Ser	Leu	Glu	Tyr	Ser	Leu	Arg	Ile	Gln
	60						65					70			
Lys	Val	Asp	Val	Tyr	Asp	Glu	Gly	Ser	Tyr	Thr	Cys	Ser	Val	Gln	Thr
	75					80					85				
Gln	His	Glu	Pro	Lys	Thr	Ser	Gln	Val	Tyr	Leu	Ile	Val	Gln	Val	Pro
90					95					100					105
Pro	Lys	Ile	Ser	Asn	Ile	Ser	Ser	Asp	Val	Thr	Val	Asn	Glu	Gly	Ser
				110					115					120	
Asn	Val	Thr	Leu	Val	Cys	Met	Ala	Asn	Gly	Arg	Pro	Glu	Pro	Val	Ile
			125						130				135		
Thr	Trp	Arg	His	Leu	Thr	Pro	Thr	Gly	Arg	Glu	Phe	Glu	Gly	Glu	Glu
		140					145					150			
Glu	Tyr	Leu	Glu	Ile	Leu	Gly	Ile	Thr	Arg	Glu	Gln	Ser	Gly	Lys	Tyr
	155					160					165				
Glu	Cys	Lys	Ala	Ala	Asn	Glu	Val	Ser	Ser	Ala	Asp	Val	Lys	Gln	Val
170					175					180					185
Lys	Val	Thr	Val	Asn	Tyr	Pro	Pro	Thr	Ile	Thr	Glu	Ser	Lys	Ser	Asn
				190					195					200	
Glu	Ala	Thr	Thr	Gly	Arg	Gln	Ala	Ser	Leu	Lys	Cys	Glu	Ala	Ser	Ala
		205						210					215		
Val	Pro	Ala	Pro	Asp	Phe	Glu	Trp	Tyr	Arg	Asp	Asp	Thr	Arg	Ile	Asn
	220						225					230			
Ser	Ala	Asn	Gly	Leu	Glu	Ile	Lys	Ser	Thr	Glu	Gly	Gln	Ser	Ser	Leu
	235					240					245				
Thr	Val	Thr	Asn	Val	Thr	Glu	Glu	His	Tyr	Gly	Asn	Tyr	Thr	Cys	Val
250					255					260					265
Ala	Ala	Asn	Lys	Leu	Gly	Val	Thr	Asn	Ala	Ser	Leu	Val	Leu	Phe	Lys
				270					275					280	
Arg	Val	Leu	Pro	Thr	Ile	Pro	His	Pro	Ile	Gln	Glu	Ile	Gly	Thr	Thr
		285						290					295		
Val	His	Phe	Lys	Gln	Lys	Gly	Ile	Phe	Leu	Ser	Glu	Ser	Gln	Arg	Gly
	300						305					310			
Glu	Thr	Thr	Lys	Ile	Thr	Leu	Asn	Cys	Gly	Asn	Leu	Phe	Leu	Arg	Asn

315		320		325
Leu His Pro Thr Ser Asp	Gln Glu Pro Gln Arg	Leu Trp Thr Leu Cys		
330	335	340	345	
Cys Leu Leu Pro Arg Lys	Gly Gln His Arg Ile	Tyr Gly Gln Cys		
350	355	360		

<210> 39
 <211> 2818
 <212> DNA
 <213> Homo sapiens

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 <222> 1..80

<220>
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 <222> 81..1517

<220>
 <221> 3'UTR
 <222> 1518..2818

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 <222> 2786..2791

<220>
 <221> polyA_site
 <222> 2804..2818

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 ctgcggagtc agacggcgct atg tac gcc ctc ttc ctc ctg gcc agc ctc ctg 113
 Met Tyr Ala Leu Phe Leu Leu Ala Ser Leu Leu
 1 5 10
 ggc gcg gct cta gcc ggc ccg gtc ctt gga ctg aaa gaa tgc acc agg 161
 Gly Ala Ala Leu Ala Gly Pro Val Leu Gly Leu Lys Glu Cys Thr Arg
 15 20 25
 ggc tcg gca gtg tgg tgc cag aat gtg aag acg gcg tcc gac tgc ggg 209
 Gly Ser Ala Val Trp Cys Gln Asn Val Lys Thr Ala Ser Asp Cys Gly
 30 35 40
 gca gtg aag cac tgc ctg cag acc gtt tgg aac aag cca aca gtg aaa 257
 Ala Val Lys His Cys Leu Gln Thr Val Trp Asn Lys Pro Thr Val Lys
 45 50 55
 tcc ctt ccc tgc gac ata tgc aaa gac gtt gtc acc gca gct ggt gat 305
 Ser Leu Pro Cys Asp Ile Cys Lys Asp Val Val Thr Ala Ala Gly Asp
 60 65 70 75
 atg ctg aag gac aat gcc act gag gag gag atc ctt gtt tac ttg gag 353
 Met Leu Lys Asp Asn Ala Thr Glu Glu Glu Ile Leu Val Tyr Leu Glu
 80 85 90
 aag acc tgt gac tgg ctt ccg aaa ccg aac atg tct gct tca tgc aag 401
 Lys Thr Cys Asp Trp Leu Pro Lys Pro Asn Met Ser Ala Ser Cys Lys
 95 100 105
 gag ata gtg gac tcc tac ctc cct gtc atc ctg gac atc att aaa gga 449

Glu	Ile	Val	Asp	Ser	Tyr	Leu	Pro	Val	Ile	Leu	Asp	Ile	Ile	Lys	Gly	
		110					115					120				
gaa	atg	agc	cgt	cct	ggg	gag	gtg	tgc	tct	gct	ctc	aac	ctc	tgc	gag	497
Glu	Met	Ser	Arg	Pro	Gly	Glu	Val	Cys	Ser	Ala	Leu	Asn	Leu	Cys	Glu	
		125					130					135				
tct	ctc	cag	aag	cac	cta	gca	gag	ctg	aat	cac	cag	aag	cag	ctg	gag	545
Ser	Leu	Gln	Lys	His	Leu	Ala	Glu	Leu	Asn	His	Gln	Lys	Gln	Leu	Glu	
		140				145					150				155	
tcc	aat	aag	atc	cca	gag	ctg	gac	atg	act	gag	gtg	gtg	gcc	ccc	ttc	593
Ser	Asn	Lys	Ile	Pro	Glu	Leu	Asp	Met	Thr	Glu	Val	Val	Ala	Pro	Phe	
				160					165					170		
atg	gcc	aac	atc	cct	ctc	ctc	ctc	tac	cct	cag	gac	ggc	ccc	cgc	agc	641
Met	Ala	Asn	Ile	Pro	Leu	Leu	Leu	Tyr	Pro	Gln	Asp	Gly	Pro	Arg	Ser	
			175						180				185			
aag	ccc	cag	cca	aag	gat	aat	ggg	gac	gtt	tgc	cag	gac	tgc	att	cag	689
Lys	Pro	Gln	Pro	Lys	Asp	Asn	Gly	Asp	Val	Cys	Gln	Asp	Cys	Ile	Gln	
		190					195					200				
atg	gtg	act	gac	atc	cag	act	gct	gta	cgg	acc	aac	tcc	acc	ttt	gtc	737
Met	Val	Thr	Asp	Ile	Gln	Thr	Ala	Val	Arg	Thr	Asn	Ser	Thr	Phe	Val	
		205					210					215				
cag	gcc	ttg	gtg	gaa	cat	gtc	aag	gag	gag	tgt	gac	cgc	ctg	ggc	cct	785
Gln	Ala	Leu	Val	Glu	His	Val	Lys	Glu	Glu	Cys	Asp	Arg	Leu	Gly	Pro	
		220				225					230				235	
ggc	atg	gcc	gac	ata	tgc	aag	aac	tat	atc	agc	cag	tat	tct	gaa	att	833
Gly	Met	Ala	Asp	Ile	Cys	Lys	Asn	Tyr	Ile	Ser	Gln	Tyr	Ser	Glu	Ile	
				240					245					250		
gct	atc	cag	atg	atg	atg	cac	atg	cag	gat	cag	caa	ccc	aag	gag	atc	881
Ala	Ile	Gln	Met	Met	Met	His	Met	Gln	Asp	Gln	Gln	Pro	Lys	Glu	Ile	
			255					260					265			
tgt	gcg	ctg	gtt	ggg	ttc	tgt	gat	gag	gtg	aaa	gag	atg	ccc	atg	cag	929
Cys	Ala	Leu	Val	Gly	Phe	Cys	Asp	Glu	Val	Lys	Glu	Met	Pro	Met	Gln	
		270					275					280				
act	ctg	gtc	ccc	gcc	aaa	gtg	gcc	tcc	aag	aat	gtc	atc	cct	gcc	ctg	977
Thr	Leu	Val	Pro	Ala	Lys	Val	Ala	Ser	Lys	Asn	Val	Ile	Pro	Ala	Leu	
		285					290				295					
gaa	ctg	gtg	gag	ccc	att	aag	aag	cac	gag	gtc	cca	gca	aag	tct	gat	1025
Glu	Leu	Val	Glu	Pro	Ile	Lys	Lys	His	Glu	Val	Pro	Ala	Lys	Ser	Asp	
					305					310					315	
gtt	tac	tgt	gag	gtg	tgt	gaa	ttc	ctg	gtg	aag	gag	gtg	acc	aag	ctg	1073
Val	Tyr	Cys	Glu	Val	Cys	Glu	Phe	Leu	Val	Lys	Glu	Val	Thr	Lys	Leu	
				320					325					330		
att	gac	aac	aac	aag	act	gag	aaa	gaa	ata	ctc	gac	gct	ttt	gac	aaa	1121
Ile	Asp	Asn	Asn	Lys	Thr	Glu	Lys	Glu	Ile	Leu	Asp	Ala	Phe	Asp	Lys	
				335				340					345			
atg	tgc	tcg	aag	ctg	ccg	aag	tcc	ctg	tcg	gaa	gag	tgc	cag	gag	gtg	1169
Met	Cys	Ser	Lys	Leu	Pro	Lys	Ser	Leu	Ser	Glu	Glu	Cys	Gln	Glu	Val	
		350					355					360				
gtg	gac	acg	tac	ggc	agc	tcc	atc	ctg	tcc	atc	ctg	ctg	gag	gag	gtc	1217
Val	Asp	Thr	Tyr	Gly	Ser	Ser	Ile	Leu	Ser	Ile	Leu	Leu	Glu	Glu	Val	
		365				370					375					
agc	cct	gag	ctg	gtg	tgc	agc	atg	ctg	cac	ctc	tgc	tct	ggc	acg	cgg	1265
Ser	Pro	Glu	Leu	Val	Cys	Ser	Met	Leu	His	Leu	Cys	Ser	Gly	Thr	Arg	
					385					390					395	
ctg	cct	gca	ctg	acc	gtt	cac	gtg	act	cag	cca	aag	gac	ggt	ggc	ttc	1313
Leu	Pro	Ala	Leu	Thr	Val	His	Val	Thr	Gln	Pro	Lys	Asp	Gly	Gly	Phe	

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      400      405      410
tgc gaa gtg tgc aag aag ctg gtg ggt tat ttg gat cgc aac ctg gag 1361
Cys Glu Val Cys Lys Lys Leu Val Gly Tyr Leu Asp Arg Asn Leu Glu
      415      420      425
aaa aac agc acc aag cag gag atc ctg gct gct ctt gag aaa ggc tgc 1409
Lys Asn Ser Thr Lys Gln Glu Ile Leu Ala Ala Leu Glu Lys Gly Cys
      430      435      440
agc ttc ctg cca gac cct tac cag aag cag tgt gat cag ttt gtg gca 1457
Ser Phe Leu Pro Asp Pro Tyr Gln Lys Gln Cys Asp Gln Phe Val Ala
      445      450      455
gag tac gag ccc gtg ctg atc gag atc ctg gtg gag gta tgg atc ctt 1505
Glu Tyr Glu Pro Val Leu Ile Glu Ile Leu Val Glu Val Trp Ile Leu
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cct tcg tgt gct tgaaaattgg agcctgcccc tcggcccata agcccttggt 1557
Pro Ser Cys Ala
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<211> 479

<212> PRT

<213> Homo sapiens

<400> 40

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Cys Gln Asn Val Lys Thr Ala Ser Asp Cys Gly Ala Val Lys His Cys
      35      40      45
Leu Gln Thr Val Trp Asn Lys Pro Thr Val Lys Ser Leu Pro Cys Asp
      50      55      60
Ile Cys Lys Asp Val Val Thr Ala Ala Gly Asp Met Leu Lys Asp Asn
65      70      75      80
Ala Thr Glu Glu Glu Ile Leu Val Tyr Leu Glu Lys Thr Cys Asp Trp

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				85					90					95			
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Tyr	Leu	Pro	Val	Ile	Leu	Asp	Ile	Ile	Lys	Gly	Glu	Met	Ser	Arg	Pro		
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Gly	Glu	Val	Cys	Ser	Ala	Leu	Asn	Leu	Cys	Glu	Ser	Leu	Gln	Lys	His		
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Leu	Ala	Glu	Leu	Asn	His	Gln	Lys	Gln	Leu	Glu	Ser	Asn	Lys	Ile	Pro		
145					150					155					160		
Glu	Leu	Asp	Met	Thr	Glu	Val	Val	Ala	Pro	Phe	Met	Ala	Asn	Ile	Pro		
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Leu	Leu	Leu	Tyr	Pro	Gln	Asp	Gly	Pro	Arg	Ser	Lys	Pro	Gln	Pro	Lys		
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Asp	Asn	Gly	Asp	Val	Cys	Gln	Asp	Cys	Ile	Gln	Met	Val	Thr	Asp	Ile		
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Gln	Thr	Ala	Val	Arg	Thr	Asn	Ser	Thr	Phe	Val	Gln	Ala	Leu	Val	Glu		
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His	Val	Lys	Glu	Glu	Cys	Asp	Arg	Leu	Gly	Pro	Gly	Met	Ala	Asp	Ile		
225					230				235						240		
Cys	Lys	Asn	Tyr	Ile	Ser	Gln	Tyr	Ser	Glu	Ile	Ala	Ile	Gln	Met	Met		
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Phe	Cys	Asp	Glu	Val	Lys	Glu	Met	Pro	Met	Gln	Thr	Leu	Val	Pro	Ala		
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Lys	Val	Ala	Ser	Lys	Asn	Val	Ile	Pro	Ala	Leu	Glu	Leu	Val	Glu	Pro		
	290					295					300						
Ile	Lys	Lys	His	Glu	Val	Pro	Ala	Lys	Ser	Asp	Val	Tyr	Cys	Glu	Val		
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Cys	Glu	Phe	Leu	Val	Lys	Glu	Val	Thr	Lys	Leu	Ile	Asp	Asn	Asn	Lys		
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Thr	Glu	Lys	Glu	Ile	Leu	Asp	Ala	Phe	Asp	Lys	Met	Cys	Ser	Lys	Leu		
			340					345					350				
Pro	Lys	Ser	Leu	Ser	Glu	Glu	Cys	Gln	Glu	Val	Val	Asp	Thr	Tyr	Gly		
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Ser	Ser	Ile	Leu	Ser	Ile	Leu	Leu	Glu	Glu	Val	Ser	Pro	Glu	Leu	Val		
		370				375					380						
Cys	Ser	Met	Leu	His	Leu	Cys	Ser	Gly	Thr	Arg	Leu	Pro	Ala	Leu	Thr		
385					390					395					400		
Val	His	Val	Thr	Gln	Pro	Lys	Asp	Gly	Gly	Phe	Cys	Glu	Val	Cys	Lys		
			405					410						415			
Lys	Leu	Val	Gly	Tyr	Leu	Asp	Arg	Asn	Leu	Glu	Lys	Asn	Ser	Thr	Lys		
			420					425					430				
Gln	Glu	Ile	Leu	Ala	Ala	Leu	Glu	Lys	Gly	Cys	Ser	Phe	Leu	Pro	Asp		
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Pro	Tyr	Gln	Lys	Gln	Cys	Asp	Gln	Phe	Val	Ala	Glu	Tyr	Glu	Pro	Val		
	450					455					460						
Leu	Ile	Glu	Ile	Leu	Val	Glu	Val	Trp	Ile	Leu	Pro	Ser	Cys	Ala			
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<211> 770

<212> DNA

<213> Homo sapiens

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 <222> 755..770

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 atg gag ctc tgc cgg tcc ctg gcc ctg ctg ggg ggc tcc ctg ggc ctg 168
 Met Glu Leu Cys Arg Ser Leu Ala Leu Leu Gly Gly Ser Leu Gly Leu
 -35 -30 -25
 atg ttc tgc ctg att gct ttg agc acc gat ttc tgg ttt gag gct gty 216
 Met Phe Cys Leu Ile Ala Leu Ser Thr Asp Phe Trp Phe Glu Ala Val
 -20 -15 -10
 ggt ccc acc cac tca gct cac tcg ggc ctc tgg cca aca ggg cat ggg 264
 Gly Pro Thr His Ser Ala His Ser Gly Leu Trp Pro Thr Gly His Gly
 -5 1 5 10
 gac atc ata tca ggc cac ggc ccg ctt gtc tca acc acc gca gcc ttt 312
 Asp Ile Ile Ser Gly His Gly Pro Leu Val Ser Thr Thr Ala Ala Phe
 15 20 25
 gct gca ggt aag gac tct gga ctg gac tgg ggc atc gcg agc cag cga 360
 Ala Ala Gly Lys Asp Ser Gly Leu Asp Trp Gly Ile Ala Ser Gln Arg
 30 35 40
 att cct gcc gag gag ctg agc cat ctc tct tgt cct tgt ccc cag cca 408
 Ile Pro Ala Glu Glu Leu Ser His Leu Ser Cys Pro Cys Pro Gln Pro
 45 50 55
 tct cca tgg tgg tgg cca tgg cgg tgt aca cca gcg agc ggt ggg acc 456
 Ser Pro Trp Trp Trp Pro Trp Arg Cys Thr Pro Ala Ser Gly Gly Thr
 60 65 70 75
 agc ctc cac acc ccc aga tcc aga cct tct tct cct ggt cct tct acc 504
 Ser Leu His Thr Pro Arg Ser Arg Pro Ser Ser Pro Gly Pro Ser Thr
 80 85 90
 tgg gct ggg tct cag cta tcc tct tgc tct gta cag gtg ccc 546
 Trp Ala Gly Ser Gln Leu Ser Ser Cys Ser Val Gln Val Pro
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 Gly Pro Thr His Ser Ala His Ser Gly Leu Trp Pro Thr Gly His Gly
 -5 1 5 10
 Asp Ile Ile Ser Gly His Gly Pro Leu Val Ser Thr Thr Ala Ala Phe
 15 20 25
 Ala Ala Gly Lys Asp Ser Gly Leu Asp Trp Gly Ile Ala Ser Gln Arg
 30 35 40
 Ile Pro Ala Glu Glu Leu Ser His Leu Ser Cys Pro Cys Pro Gln Pro
 45 50 55
 Ser Pro Trp Trp Trp Pro Trp Arg Cys Thr Pro Ala Ser Gly Gly Thr
 60 65 70 75
 Ser Leu His Thr Pro Arg Ser Arg Pro Ser Ser Pro Gly Pro Ser Thr
 80 85 90
 Trp Ala Gly Ser Gln Leu Ser Ser Cys Ser Val Gln Val Pro
 95 100 105

<210> 43
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<220>
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 <222> 1255..1340

<400> 43

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ccccactagg tgaag atg tca gcc cag gag agc tgc ctc agc ctc atc aag 171
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tac ttc ctc ttc gtt ttc aac ctc ttc ttc ttc gtc ctc ggc agc ctg 219
Tyr Phe Leu Phe Val Phe Asn Leu Phe Phe Phe Val Leu Gly Ser Leu
      15      20      25
atc ttc tgc ttc ggc atc tgg atc ctc att gac aag acc agc ttc gtg 267
Ile Phe Cys Phe Gly Ile Trp Ile Leu Ile Asp Lys Thr Ser Phe Val
      30      35      40
tcc ttt gtg ggc ttg gcc ttc gtg cct ctg cag atc tgg tcc aaa gtc 315
Ser Phe Val Gly Leu Ala Phe Val Pro Leu Gln Ile Trp Ser Lys Val
45      50      55      60
ctg gcc atc tca gga atc ttc acc atg ggc atc gcc ctc ctg ggt tgt 363
Leu Ala Ile Ser Gly Ile Phe Thr Met Gly Ile Ala Leu Leu Gly Cys
      65      70      75
gtg ggg gcc ctc aag gag ctc cgc tgc ctc ctg ggc ctg tat ttt ggg 411
Val Gly Ala Leu Lys Glu Leu Arg Cys Leu Leu Gly Leu Tyr Phe Gly
      80      85      90
atg ctg ctg ctc ctg ttt gcc aca cag atc acc ctg gga atc ctc atc 459
Met Leu Leu Leu Leu Phe Ala Thr Gln Ile Thr Leu Gly Ile Leu Ile
      95      100      105
tcc act cag cgg gcc agc tgg agc gaa gct tgc ggg acg tcg 501
Ser Thr Gln Arg Ala Ser Trp Ser Glu Ala Cys Gly Thr Ser
      110      115      120
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<210> 44
<211> 122
<212> PRT
<213> Homo sapiens

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      20      25      30
Gly Ile Trp Ile Leu Ile Asp Lys Thr Ser Phe Val Ser Phe Val Gly
      35      40      45
Leu Ala Phe Val Pro Leu Gln Ile Trp Ser Lys Val Leu Ala Ile Ser
      50      55      60

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Gly	Ile	Phe	Thr	Met	Gly	Ile	Ala	Leu	Leu	Gly	Cys	Val	Gly	Ala	Leu
65					70					75					80
Lys	Glu	Leu	Arg	Cys	Leu	Leu	Gly	Leu	Tyr	Phe	Gly	Met	Leu	Leu	Leu
				85					90					95	
Leu	Phe	Ala	Thr	Gln	Ile	Thr	Leu	Gly	Ile	Leu	Ile	Ser	Thr	Gln	Arg
			100					105					110		
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 <213> Homo sapiens

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 <222> 1937..1942

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 atg cgc ctc cgc cgc cta gcg ctg ttc ccg ggt gtg gcg ctg ctt ctt 165
 Met Arg Leu Arg Arg Leu Ala Leu Phe Pro Gly Val Ala Leu Leu Leu
 -20 -15 -10
 gcc gcg gcc cgc ctc gcc gct gcc tcc gac gtg cta gaa ctc acg gac 213
 Ala Ala Ala Arg Leu Ala Ala Ala Ser Asp Val Leu Glu Leu Thr Asp
 -5 1 5
 gac aac ttc gag agt cgc atc tcc gac acg ggc tct gcg ggc ctc atg 261
 Asp Asn Phe Glu Ser Arg Ile Ser Asp Thr Gly Ser Ala Gly Leu Met
 10 15 20
 ctc gtc gag ttc ttc gct ccc tgg tgt gga cac tgc aag aga ctt gca 309
 Leu Val Glu Phe Phe Ala Pro Trp Cys Gly His Cys Lys Arg Leu Ala
 25 30 35 40
 cct gag tat gaa gct gca gct acc aga tta aaa gga ata gtc cca tta 357
 Pro Glu Tyr Glu Ala Ala Ala Thr Arg Leu Lys Gly Ile Val Pro Leu
 45 50 55
 gca aag gtt gat tgc act gcc aac act aac acc tgt aat aaa tat gga 405
 Ala Lys Val Asp Cys Thr Ala Asn Thr Asn Thr Cys Asn Lys Tyr Gly
 60 65 70

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Val	Ser	Gly	Tyr	Pro	Thr	Leu	Lys	Ile	Phe	Arg	Asp	Gly	Glu	Glu	Ala	
		75					80					85				
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Gly	Ala	Tyr	Asp	Gly	Pro	Arg	Thr	Ala	Asp	Gly	Ile	Val	Ser	His	Leu	
	90					95					100					
aag	aag	cag	gca	gga	cca	gct	tca	gtg	cct	ctc	agg	act	gag	gaa	gaa	549
Lys	Lys	Gln	Ala	Gly	Pro	Ala	Ser	Val	Pro	Leu	Arg	Thr	Glu	Glu	Glu	
	105				110					115					120	
ttt	aag	aaa	ttc	att	agt	gat	aaa	gat	gcc	tct	ata	gta	ggt	ttt	ttc	597
Phe	Lys	Lys	Phe	Ile	Ser	Asp	Lys	Asp	Ala	Ser	Ile	Val	Gly	Phe	Phe	
			125						130					135		
gat	gat	tca	ttc	agt	gag	gct	cac	tcc	gag	ttc	cta	aaa	gca	gcc	agc	645
Asp	Asp	Ser	Phe	Ser	Glu	Ala	His	Ser	Glu	Phe	Leu	Lys	Ala	Ala	Ser	
			140					145					150			
aac	ttg	agg	gat	aac	tac	cga	ttt	gca	cat	acg	aat	gtt	gag	tct	ctg	693
Asn	Leu	Arg	Asp	Asn	Tyr	Arg	Phe	Ala	His	Thr	Asn	Val	Glu	Ser	Leu	
	155						160					165				
gtg	aac	gag	tat	gat	gat	aat	gga	gag	ggt	atc	atc	tta	ttt	cgt	cct	741
Val	Asn	Glu	Tyr	Asp	Asp	Asn	Gly	Glu	Gly	Ile	Ile	Leu	Phe	Arg	Pro	
	170					175						180				
tca	cat	ctc	act	aac	aag	ttt	gag	gac	aag	act	gtg	gca	tat	aca	gag	789
Ser	His	Leu	Thr	Asn	Lys	Phe	Glu	Asp	Lys	Thr	Val	Ala	Tyr	Thr	Glu	
	185				190					195					200	
caa	aaa	atg	acc	agt	ggc	aaa	att	aaa	aag	ttt	atc	cag	gaa	aac	att	837
Gln	Lys	Met	Thr	Ser	Gly	Lys	Ile	Lys	Lys	Phe	Ile	Gln	Glu	Asn	Ile	
				205					210					215		
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Phe	Gly	Ile	Cys	Pro	His	Met	Thr	Glu	Asp	Asn	Lys	Asp	Leu	Ile	Gln	
			220					225					230			
ggc	aag	gac	tta	ctt	att	gct	tac	tat	gat	gtg	gac	tat	gaa	aag	aac	933
Gly	Lys	Asp	Leu	Leu	Ile	Ala	Tyr	Tyr	Asp	Val	Asp	Tyr	Glu	Lys	Asn	
	235					240						245				
gct	aaa	ggt	tcc	aac	tac	agg	aga	aac	agg	gta	atg	atg	gtg	gca	aag	981
Ala	Lys	Gly	Ser	Asn	Tyr	Arg	Arg	Asn	Arg	Val	Met	Met	Val	Ala	Lys	
	250					255						260				
aaa	ttc	ctg	gat	gct	ggg	cac	aaa	ctc	aac	ttt	gct	gta	gct	agc	cgc	1029
Lys	Phe	Leu	Asp	Ala	Gly	His	Lys	Leu	Asn	Phe	Ala	Val	Ala	Ser	Arg	
	265				270					275					280	
aaa	acc	ttt	agc	cat	gaa	ctt	tct	gat	ttt	ggc	ttg	gag	agc	act	gct	1077
Lys	Thr	Phe	Ser	His	Glu	Leu	Ser	Asp	Phe	Gly	Leu	Glu	Ser	Thr	Ala	
				285					290					295		
gga	gag	att	cct	gtt	gtt	gct	atc	aga	act	gct	aaa	gga	gag	aag	ttt	1125
Gly	Glu	Ile	Pro	Val	Val	Ala	Ile	Arg	Thr	Ala	Lys	Gly	Glu	Lys	Phe	
			300					305					310			
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Val	Met	Gln	Glu	Glu	Phe	Ser	Arg	Asp	Gly	Lys	Ala	Leu	Glu	Arg	Phe	
		315					320						325			
ctg	cag	gat	tac	ttt	gat	ggc	aat	ctg	aag	aga	tac	ctg	aag	tct	gaa	1221
Leu	Gln	Asp	Tyr	Phe	Asp	Gly	Asn	Leu	Lys	Arg	Tyr	Leu	Lys	Ser	Glu	
	330					335					340					
cct	atc	cca	gag	agc	aat	gat	ggg	cct	gtg	aag	gta	gtg	gta	gca	gag	1269
Pro	Ile	Pro	Glu	Ser	Asn	Asp	Gly	Pro	Val	Lys	Val	Val	Val	Ala	Glu	
	345				350					355					360	
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Phe Tyr Ala Pro Trp Cys Gly His Cys Lys Asn Leu Glu Pro Lys Tyr
      380      385      390
aaa gaa ctt ggc gag aag ctc agc aaa gac cca aat atc gtc ata gcc 1413
Lys Glu Leu Gly Glu Lys Leu Ser Lys Asp Pro Asn Ile Val Ile Ala
      395      400      405
aag atg gat gcc aca gcc aat gat gtg cct tct cca tat gaa gtc aga 1461
Lys Met Asp Ala Thr Ala Asn Asp Val Pro Ser Pro Tyr Glu Val Arg
      410      415      420
ggg ttt cct acc ata tac ttc tct cca gcc aac aag aag cta aat cca 1509
Gly Phe Pro Thr Ile Tyr Phe Ser Pro Ala Asn Lys Lys Leu Asn Pro
      425      430      435      440
aag aaa tat gaa ggt ggc cgt gaa tta agt gat ttt att agc tat cta 1557
Lys Lys Tyr Glu Gly Gly Arg Glu Leu Ser Asp Phe Ile Ser Tyr Leu
      445      450      455
caa aga gaa gct aca atc ccc cct gta att caa gaa gaa aaa ccc aag 1605
Gln Arg Glu Ala Thr Ile Pro Pro Val Ile Gln Glu Glu Lys Pro Lys
      460      465      470
aag aag aag aag gca cag gag gat ctc taaagcagta gccaaacacc 1652
Lys Lys Lys Lys Ala Gln Glu Asp Leu
      475      480
actttgtaaa aggactcttc catcagagat gggaaaacca ttgggggagga ctaggaccca 1712
tatgggaatt attacctctc agggccgaga ggacagaatg gatataatct gaatcctgtt 1772
aaattttctc taaactgttt cttagctgca ctgtttatgg aaataccagg accagtttat 1832
gtttgtgggt ttgggaaaaa ttatttgtgt tgggggaaat gttgtggggg tgggggttgag 1892
ttggggggtat tttctaattt tttttgtaca tttggaacag tgacaataaa tgagaccctt 1952
tttaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaawaaaa aaaaaaa 1999

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<210> 46
 <211> 505
 <212> PRT
 <213> Homo sapiens

<220>
 <221> SIGNAL
 <222> 1..24

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<400> 46
Met Arg Leu Arg Arg Leu Ala Leu Phe Pro Gly Val Ala Leu Leu Leu
      -20      -15      -10
Ala Ala Ala Arg Leu Ala Ala Ala Ser Asp Val Leu Glu Leu Thr Asp
      -5      1      5
Asp Asn Phe Glu Ser Arg Ile Ser Asp Thr Gly Ser Ala Gly Leu Met
      10      15      20
Leu Val Glu Phe Phe Ala Pro Trp Cys Gly His Cys Lys Arg Leu Ala
      25      30      35      40
Pro Glu Tyr Glu Ala Ala Ala Thr Arg Leu Lys Gly Ile Val Pro Leu
      45      50      55
Ala Lys Val Asp Cys Thr Ala Asn Thr Asn Thr Cys Asn Lys Tyr Gly
      60      65      70
Val Ser Gly Tyr Pro Thr Leu Lys Ile Phe Arg Asp Gly Glu Glu Ala
      75      80      85
Gly Ala Tyr Asp Gly Pro Arg Thr Ala Asp Gly Ile Val Ser His Leu

```

90	95	100
Lys Lys Gln Ala Gly Pro Ala Ser Val Pro Leu Arg Thr Glu Glu Glu		
105	110	115
Phe Lys Lys Phe Ile Ser Asp Lys Asp Ala Ser Ile Val Gly Phe Phe		120
	125	130
Asp Asp Ser Phe Ser Glu Ala His Ser Glu Phe Leu Lys Ala Ala Ser		135
	140	145
Asn Leu Arg Asp Asn Tyr Arg Phe Ala His Thr Asn Val Glu Ser Leu		150
	155	160
Val Asn Glu Tyr Asp Asp Asn Gly Glu Gly Ile Ile Leu Phe Arg Pro		165
	170	175
Ser His Leu Thr Asn Lys Phe Glu Asp Lys Thr Val Ala Tyr Thr Glu		180
	185	190
Gln Lys Met Thr Ser Gly Lys Ile Lys Lys Phe Ile Gln Glu Asn Ile		195
	205	210
Phe Gly Ile Cys Pro His Met Thr Glu Asp Asn Lys Asp Leu Ile Gln		215
	220	225
Gly Lys Asp Leu Leu Ile Ala Tyr Tyr Asp Val Asp Tyr Glu Lys Asn		230
	235	240
Ala Lys Gly Ser Asn Tyr Arg Arg Asn Arg Val Met Met Val Ala Lys		245
	250	255
Lys Phe Leu Asp Ala Gly His Lys Leu Asn Phe Ala Val Ala Ser Arg		260
	265	270
Lys Thr Phe Ser His Glu Leu Ser Asp Phe Gly Leu Glu Ser Thr Ala		275
	285	290
Gly Glu Ile Pro Val Val Ala Ile Arg Thr Ala Lys Gly Glu Lys Phe		295
	300	305
Val Met Gln Glu Glu Phe Ser Arg Asp Gly Lys Ala Leu Glu Arg Phe		310
	315	320
Leu Gln Asp Tyr Phe Asp Gly Asn Leu Lys Arg Tyr Leu Lys Ser Glu		325
	330	335
Pro Ile Pro Glu Ser Asn Asp Gly Pro Val Lys Val Val Val Ala Glu		340
	345	350
Asn Phe Asp Glu Ile Val Asn Asn Glu Asn Lys Asp Val Leu Ile Glu		355
	365	370
Phe Tyr Ala Pro Trp Cys Gly His Cys Lys Asn Leu Glu Pro Lys Tyr		375
	380	385
Lys Glu Leu Gly Glu Lys Leu Ser Lys Asp Pro Asn Ile Val Ile Ala		390
	395	400
Lys Met Asp Ala Thr Ala Asn Asp Val Pro Ser Pro Tyr Glu Val Arg		405
	410	415
Gly Phe Pro Thr Ile Tyr Phe Ser Pro Ala Asn Lys Lys Leu Asn Pro		420
	425	430
Lys Lys Tyr Glu Gly Gly Arg Glu Leu Ser Asp Phe Ile Ser Tyr Leu		435
	445	450
Gln Arg Glu Ala Thr Ile Pro Pro Val Ile Gln Glu Glu Lys Pro Lys		455
	460	465
Lys Lys Lys Lys Ala Gln Glu Asp Leu		470
	475	480

<210> 47

<211> 836

<212> DNA

<213> Homo sapiens

<220>
 <221> 5'UTR
 <222> 1..153

<220>
 <221> CDS
 <222> 154..546

<220>
 <221> 3'UTR
 <222> 547..836

<220>
 <221> polyA_site
 <222> 722..836

<400> 47
 acccctccct ggcccccgcc tcccggactc ctgaccaaatt gacccccccc ggcaggtggt 60
 tcgcccgtgc cgggttcattg ctcacaagca gacagctcct ccgcctctga tgcagaattt 120
 gatgctgtgg ttggatatatt agaggacatt atc atg gat gac gag ttc cag tta 174
 Met Asp Asp Glu Phe Gln Leu
 1 5
 tta cag aga aat ttc atg gac aag tac tac ctg gag ttt gaa gac aca 222
 Leu Gln Arg Asn Phe Met Asp Lys Tyr Tyr Leu Glu Phe Glu Asp Thr
 10 15 20
 gaa gag aat aaa ctc atc tac aca cct att ttt aat gaa tac att tct 270
 Glu Glu Asn Lys Leu Ile Tyr Thr Pro Ile Phe Asn Glu Tyr Ile Ser
 25 30 35
 ttg gta gaa aaa tac att gaa gaa cag ctg ctg cag cgg att cct gag 318
 Leu Val Glu Lys Tyr Ile Glu Glu Gln Leu Leu Gln Arg Ile Pro Glu
 40 45 50 55
 ttc aac atg gca gcc ttc acc aca aca tta cag cac cat aag gat gaa 366
 Phe Asn Met Ala Ala Phe Thr Thr Thr Leu Gln His His Lys Asp Glu
 60 65 70
 gtg gct ggt gac ata ttc gac atg ctg ctc acc ttc aca gat ttt ctg 414
 Val Ala Gly Asp Ile Phe Asp Met Leu Leu Thr Phe Thr Asp Phe Leu
 75 80 85
 gct ttt aaa gaa atg ttt ttg gac tac aga gca gaa aaa gaa ggc cga 462
 Ala Phe Lys Glu Met Phe Leu Asp Tyr Arg Ala Glu Lys Glu Gly Arg
 90 95 100
 gga ctg gac tta agc agt ggc tta gtg gtg act tca ttg tgc aaa tca 510
 Gly Leu Asp Leu Ser Ser Gly Leu Val Val Thr Ser Leu Cys Lys Ser
 105 110 115
 tct tct ctg cca gct tcc cag aac aat ctg cgg cac taggtcctac 556
 Ser Ser Leu Pro Ala Ser Gln Asn Asn Leu Arg His
 120 125 130
 ctccagccaa tgaatgggat cattctggat gtcaccagcc caataggctc agctcatgat 616
 gacagaacac atcttggaat gactgactct gttatgtaac tcttcattta tgttaagtat 676
 taatagggtca aaaccaaatt gacctaacc tcttggaact atttcaaaaa aaaaaaaaaa 736
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 796
 aaaaaaaaaa aaaaaaaaaa aaaagaaaaa aaaaaaaaaa 836

<210> 48
 <211> 131
 <212> PRT

<213> Homo sapiens

<400> 48

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Met Asp Asp Glu Phe Gln Leu Leu Gln Arg Asn Phe Met Asp Lys Tyr
1          5          10          15
Tyr Leu Glu Phe Glu Asp Thr Glu Glu Asn Lys Leu Ile Tyr Thr Pro
          20          25          30
Ile Phe Asn Glu Tyr Ile Ser Leu Val Glu Lys Tyr Ile Glu Glu Gln
          35          40          45
Leu Leu Gln Arg Ile Pro Glu Phe Asn Met Ala Ala Phe Thr Thr Thr
          50          55          60
Leu Gln His His Lys Asp Glu Val Ala Gly Asp Ile Phe Asp Met Leu
65          70          75          80
Leu Thr Phe Thr Asp Phe Leu Ala Phe Lys Glu Met Phe Leu Asp Tyr
          85          90          95
Arg Ala Glu Lys Glu Gly Arg Gly Leu Asp Leu Ser Ser Gly Leu Val
          100          105          110
Val Thr Ser Leu Cys Lys Ser Ser Ser Leu Pro Ala Ser Gln Asn Asn
          115          120          125
Leu Arg His
          130

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<210> 49

<211> 862

<212> DNA

<213> Homo sapiens

<220>

<221> 5'UTR

<222> 1..195

<220>

<221> CDS

<222> 196..708

<220>

<221> 3'UTR

<222> 709..862

<220>

<221> polyA_site

<222> 847..862

<400> 49

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ttcgcccctc ggagctggaa atgcagctat tgagatcttc gaatgctgcg gagctggagg 60
cggaggcagc tggggagggtc cgagc gatgt gaccaggccg ccatcgctcg tctcttcctc 120
tctcctgccg cctcctgtct cgtaaataac ttttttactc taaagaaaga aagacaaaag 180
tagtcgtccg ccccc atg cat ccc ttc tac acc cgg gcc gcc acc atg ata 231
          Met His Pro Phe Tyr Thr Arg Ala Ala Thr Met Ile
          1          5          10
ggc gag atc gcc gcc gcc gtg tcc ttc atc tcc aag ttt ctc cgc acc 279
Gly Glu Ile Ala Ala Ala Val Ser Phe Ile Ser Lys Phe Leu Arg Thr
          15          20          25
aag ggg ctc acg agc gag cga cag ctg cag acc ttc agc cag agc ctg 327
Lys Gly Leu Thr Ser Glu Arg Gln Leu Gln Thr Phe Ser Gln Ser Leu

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```

      30      35      40
cag gag ctg ctg gca gaa cat tat aaa cat cac tgg ttc cca gaa aag 375
Gln Glu Leu Leu Ala Glu His Tyr Lys His His Trp Phe Pro Glu Lys
45      50      55      60
cca tgc aag gga tcg ggt tac cgt tgt att cgc atc aac cat aaa atg 423
Pro Cys Lys Gly Ser Gly Tyr Arg Cys Ile Arg Ile Asn His Lys Met
      65      70      75
gat cct ctg att gga cag gca gca cag cgg att gga ctg agc agt cag 471
Asp Pro Leu Ile Gly Gln Ala Ala Gln Arg Ile Gly Leu Ser Ser Gln
      80      85      90
gag ctg ttc agg ctt ctc cca agt gaa ctc aca ctc tgg gtt gac ccc 519
Glu Leu Phe Arg Leu Leu Pro Ser Glu Leu Thr Leu Trp Val Asp Pro
      95      100      105
tat gaa gtg tcc tac aga att gga gag gat ggc tcc atc tgt gtg ctg 567
Tyr Glu Val Ser Tyr Arg Ile Gly Glu Asp Gly Ser Ile Cys Val Leu
      110      115      120
tat gaa gcc tca cca gca gga ggt agc act caa aac agc acc aac gtg 615
Tyr Glu Ala Ser Pro Ala Gly Gly Ser Thr Gln Asn Ser Thr Asn Val
      125      130      135      140
caa atg gta gac agc cga atc agc tgt aag gag gaa ctt ctc ttg ggc 663
Gln Met Val Asp Ser Arg Ile Ser Cys Lys Glu Glu Leu Leu Leu Gly
      145      150      155
aga acg agc cct tcc aaa aac tac aat atg atg act gta tca agt 708
Arg Thr Ser Pro Ser Lys Asn Tyr Asn Met Met Thr Val Ser Ser
      160      165      170
taagatatag tctgtggatg gatcatctga tgatgatgga taaatttgat ttttgctttg 768
ggtgggctcc tcttggggat ggattatgga atttaaacca tgtcacagct gtgaagatct 828
ggcacaagat agaatggcaa aaaaaaaaaa aaaa 862

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<210> 50

<211> 171

<212> PRT

<213> Homo sapiens

<400> 50

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Met His Pro Phe Tyr Thr Arg Ala Ala Thr Met Ile Gly Glu Ile Ala
1      5      10      15
Ala Ala Val Ser Phe Ile Ser Lys Phe Leu Arg Thr Lys Gly Leu Thr
      20      25      30
Ser Glu Arg Gln Leu Gln Thr Phe Ser Gln Ser Leu Gln Glu Leu Leu
      35      40      45
Ala Glu His Tyr Lys His His Trp Phe Pro Glu Lys Pro Cys Lys Gly
      50      55      60
Ser Gly Tyr Arg Cys Ile Arg Ile Asn His Lys Met Asp Pro Leu Ile
65      70      75      80
Gly Gln Ala Ala Gln Arg Ile Gly Leu Ser Ser Gln Glu Leu Phe Arg
      85      90      95
Leu Leu Pro Ser Glu Leu Thr Leu Trp Val Asp Pro Tyr Glu Val Ser
      100      105      110
Tyr Arg Ile Gly Glu Asp Gly Ser Ile Cys Val Leu Tyr Glu Ala Ser
      115      120      125
Pro Ala Gly Gly Ser Thr Gln Asn Ser Thr Asn Val Gln Met Val Asp
      130      135      140
Ser Arg Ile Ser Cys Lys Glu Glu Leu Leu Leu Gly Arg Thr Ser Pro
145      150      155      160

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<400> 51																
gaggaaagag tcatcagagg gatcagcagc tccaggggaag gcctggctgc cccgcttcta																60
a atg cca ctc ccc ctc cca tca gcg ttc gtg ctg tca gcc ttg cag cct																109
Met Pro Leu Pro Leu Pro Ser Ala Phe Val Leu Ser Ala Leu Gln Pro																
-20				-15				-10								
tct	cct	act	cat	tcc	agc	tcc	aat	acc	cag	cgg	ctg	cca	gac	cga	gtg	157
Ser	Pro	Thr	His	Ser	Ser	Ser	Asn	Thr	Gln	Arg	Leu	Pro	Asp	Arg	Val	
-5				1				5				10				
acc	ggc	ggc	ttc	tca	gtg	aat	gga	cag	ctc	att	ggc	aac	aag	gcc	agg	205
Thr	Gly	Gly	Phe	Ser	Val	Asn	Gly	Gln	Leu	Ile	Gly	Asn	Lys	Ala	Arg	
15				20				25								
agc	cct	ggg	cag	cat	gac	ggc	acg	tac	ttc	ggg	cgg	ctg	gga	atc	gca	253
Ser	Pro	Gly	Gln	His	Asp	Gly	Thr	Tyr	Phe	Gly	Arg	Leu	Gly	Ile	Ala	
30				35				40								
aac	cct	gcc	acg	gac	ttt	cag	ttg	gaa	gtg	act	cct	cag	aac	att	acg	301
Asn	Pro	Ala	Thr	Asp	Phe	Gln	Leu	Glu	Val	Thr	Pro	Gln	Asn	Ile	Thr	
45				50				55								
ctg	aac	ccc	ggc	ttt	ggt	ggg	cct	gtg	ttt	tcc	tgg	agg	gac	caa	gct	349
Leu	Asn	Pro	Gly	Phe	Gly	Gly	Pro	Val	Phe	Ser	Trp	Arg	Asp	Gln	Ala	
60				65				70				75				
gtg	ctg	cgg	cag	gac	ggg	gtg	gtg	gtg	acc	atc	aac	aag	aag	agg	aac	397
Val	Leu	Arg	Gln	Asp	Gly	Val	Val	Val	Thr	Ile	Asn	Lys	Lys	Arg	Asn	
80				85				90								
ctg	gtg	gtg	tct	gtg	gac	gac	ggt	ggc	acc	ttt	gag	gtt	gtt	ttg	cac	445
Leu	Val	Val	Ser	Val	Asp	Asp	Gly	Gly	Thr	Phe	Glu	Val	Val	Leu	His	
95				100				105								
cga	gtg	tgg	aag	ggg	agc	tcg	gtc	cac	cag	gac	ttc	ctg	ggc	ttc	tat	493

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Arg Val Trp Lys Gly Ser Ser Val His Gln Asp Phe Leu Gly Phe Tyr
      110      115      120
gtg ctg gac agt cat cgg atg tca gcc cgg acg cac ggg ctg ctg ggg 541
Val Leu Asp Ser His Arg Met Ser Ala Arg Thr His Gly Leu Leu Gly
      125      130      135
caa ttt ttc cac ccc atc ggt ttt gaa gtg tct gac atc cac cca ggc 589
Gln Phe Phe His Pro Ile Gly Phe Glu Val Ser Asp Ile His Pro Gly
140      145      150      155
tct gac ccc aca aag cca gat gcc acg atg gtg gtg agg aac cgc cgg 637
Ser Asp Pro Thr Lys Pro Asp Ala Thr Met Val Val Arg Asn Arg Arg
      160      165      170
ctc acg gtc acc agg ggt ttg caa aaa gac tac agc aag gac ccg tgg 685
Leu Thr Val Thr Arg Gly Leu Gln Lys Asp Tyr Ser Lys Asp Pro Trp
      175      180      185
cat ggg gcc gag gtg tcc tgc tgg ttc att cac aac aat ggg gct gga 733
His Gly Ala Glu Val Ser Cys Trp Phe Ile His Asn Asn Gly Ala Gly
      190      195      200
ctc atc gat ggt gcc tac act gat tat atc gtc ccc gac atc ttc 778
Leu Ile Asp Gly Ala Tyr Thr Asp Tyr Ile Val Pro Asp Ile Phe
      205      210      215
tgagccctct ggccagcacg cctgtcctcc cccggggcca aggcagagga ggaggacgac 838
atcctgacct gctgctgagg ctgtacctcc ttgactaagc tggttccttg tgtcaaagca 898
cctcatgcct tccattaaag agaggccgtg tccaaaaaaa aaaaaaaaaa 947

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<210> 52
 <211> 239
 <212> PRT
 <213> Homo sapiens

<220>
 <221> SIGNAL
 <222> 1..21

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<400> 52
Met Pro Leu Pro Leu Pro Ser Ala Phe Val Leu Ser Ala Leu Gln Pro
      -20      -15      -10
Ser Pro Thr His Ser Ser Ser Asn Thr Gln Arg Leu Pro Asp Arg Val
-5      1      5      10
Thr Gly Gly Phe Ser Val Asn Gly Gln Leu Ile Gly Asn Lys Ala Arg
      15      20      25
Ser Pro Gly Gln His Asp Gly Thr Tyr Phe Gly Arg Leu Gly Ile Ala
      30      35      40
Asn Pro Ala Thr Asp Phe Gln Leu Glu Val Thr Pro Gln Asn Ile Thr
      45      50      55
Leu Asn Pro Gly Phe Gly Gly Pro Val Phe Ser Trp Arg Asp Gln Ala
60      65      70      75
Val Leu Arg Gln Asp Gly Val Val Val Thr Ile Asn Lys Lys Arg Asn
      80      85      90
Leu Val Val Ser Val Asp Asp Gly Gly Thr Phe Glu Val Val Leu His
      95      100      105
Arg Val Trp Lys Gly Ser Ser Val His Gln Asp Phe Leu Gly Phe Tyr
      110      115      120
Val Leu Asp Ser His Arg Met Ser Ala Arg Thr His Gly Leu Leu Gly
      125      130      135
Gln Phe Phe His Pro Ile Gly Phe Glu Val Ser Asp Ile His Pro Gly

```

140		145		150		155									
Ser	Asp	Pro	Thr	Lys	Pro	Asp	Ala	Thr	Met	Val	Val	Arg	Asn	Arg	Arg
				160					165					170	
Leu	Thr	Val	Thr	Arg	Gly	Leu	Gln	Lys	Asp	Tyr	Ser	Lys	Asp	Pro	Trp
			175					180					185		
His	Gly	Ala	Glu	Val	Ser	Cys	Trp	Phe	Ile	His	Asn	Asn	Gly	Ala	Gly
		190					195					200			
Leu	Ile	Asp	Gly	Ala	Tyr	Thr	Asp	Tyr	Ile	Val	Pro	Asp	Ile	Phe	
	205					210					215				

<210> 53
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 53
 Val Met Ala Leu Ile Leu Leu Ile Leu Cys Val Gly Met Val Val Gly
 1 5 10 15
 Leu Val Ala Leu Gly Ile Trp
 20

<210> 54
 <211> 90
 <212> PRT
 <213> Homo sapiens

<400> 54
 Gln Tyr Cys Thr Asp Met Asn Ala Thr Leu Leu Lys Ile Asp Asn Arg
 1 5 10 15
 Asn Ile Val Glu Tyr Ile Lys Ala Arg Thr His Leu Ile Arg Trp Val
 20 25 30
 Gly Leu Ser Arg Gln Lys Ser Asn Glu Val Trp Lys Trp Glu Asp Gly
 35 40 45
 Ser Val Ile Ser Glu Asn Met Phe Glu Phe Leu Glu Asp Gly Lys Gly
 50 55 60
 Asn Met Asn Cys Ala Tyr Phe His Asn Gly Lys Met His Pro Thr Phe
 65 70 75 80
 Cys Glu Asn Lys His Tyr Leu Met Cys Glu
 85 90

<210> 55
 <211> 20
 <212> PRT
 <213> Homo sapiens

<400> 55
 Arg His Asn Leu Thr Trp Glu Glu Ser Lys Gln Tyr Cys Thr Asp Met
 1 5 10 15
 Asn Ala Thr Leu
 20

<210> 56
 <211> 50
 <212> PRT
 <213> Homo sapiens

<400> 56
 Met Val Gln Leu His Gln Asp Thr Asp Pro Gln Ile Pro Lys Gly Gln
 1 5 10 15
 Pro Cys Thr Leu Asn Ser Ser Glu Gly Gly Ala Arg Pro Ala Val Pro
 20 25 30
 His Thr Leu Phe Ser Ser Ala Leu Asp Arg Trp Leu His Asn Asp Ser
 35 40 45
 Phe Ile
 50

<210> 57
 <211> 12
 <212> PRT
 <213> Homo sapiens

<400> 57
 His Glu Leu Gly His Asn Leu Gly Met Gln His Asp
 1 5 10

<210> 58
 <211> 9
 <212> PRT
 <213> Homo sapiens

<400> 58
 Glu Glu Gly Glu Glu Cys Asp Cys Gly
 1 5

<210> 59
 <211> 17
 <212> PRT
 <213> Homo sapiens

<400> 59
 Gln Leu His Gln Asp Thr Asp Pro Gln Ile Pro Lys Gly Gln Pro Cys
 1 5 10 15
 Thr

<210> 60
 <211> 9
 <212> PRT
 <213> Homo sapiens

<400> 60
 Leu Asn Ser Ser Glu Gly Gly Ala Arg
 1 5

<210> 61
 <211> 21
 <212> PRT
 <213> Homo sapiens

<400> 61
 Cys Ser Ser Gly Leu Gln Ala Val Ala Ser Ile Ala Gly Trp Ser Pro

1 5
Cys Pro Trp Leu Thr
 20

10

15

<210> 62
<211> 121
<212> PRT
<213> Homo sapiens

<400> 62
Ala Pro Gln Ala Ser Ala Ala Asp Val Val Val Val His Gly Arg Arg
1 5 10 15
Thr Ala Ile Cys Arg Ala Gly Arg Gly Gly Phe Lys Asp Thr Thr Pro
 20 25 30
Asp Glu Leu Leu Ser Ala Val Met Thr Ala Val Leu Lys Asp Val Asn
 35 40 45
Leu Arg Pro Glu Gln Leu Gly Asp Ile Cys Val Gly Asn Val Leu Gln
 50 55 60
Pro Gly Ala Gly Ala Ile Met Ala Arg Ile Ala Gln Phe Leu Ser Asp
65 70 75 80
Ile Pro Glu Thr Val Pro Leu Ser Thr Val Asn Arg Gln Cys Ser Ser
 85 90 95
Gly Leu Gln Ala Val Ala Ser Ile Ala Gly Trp Ser Pro Cys Pro Trp
 100 105 110
Leu Thr Glu Gly Thr Leu Glu Ile Leu
 115 120

<210> 63
<211> 23
<212> PRT
<213> Homo sapiens

<400> 63
Met Pro Phe Ser His Leu Ser Thr Tyr Ser Leu Val Trp Val Met Ala
1 5 10 15
Ala Val Val Leu Cys Thr Ala
 20

<210> 64
<211> 23
<212> PRT
<213> Homo sapiens

<400> 64
Val Pro Leu Leu Leu Ser Ile Val Ser Leu Val Ile Leu Leu Val Leu
1 5 10 15
Ile Ser Ile Leu Leu Tyr Trp
 20

<210> 65
<211> 78
<212> PRT
<213> Homo sapiens

<400> 65

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Thr Ala Ser Leu Lys Cys Ser Leu Gln Asn Ala Gln Glu Ala Leu Ile
1          5          10          15
Val Thr Trp Gln Lys Lys Lys Ala Val Ser Pro Glu Asn Met Val Thr
          20          25          30
Phe Ser Glu Asn His Gly Val Val Ile Gln Pro Ala Tyr Lys Asp Lys
          35          40          45
Ile Asn Ile Thr Gln Leu Gly Leu Gln Asn Ser Thr Ile Thr Phe Trp
          50          55          60
Asn Ile Thr Leu Glu Asp Glu Gly Cys Tyr Met Cys Leu Phe
65          70          75

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<210> 66
<211> 64
<212> PRT
<213> Homo sapiens

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<400> 66
Glu Asp His Leu Asn Ile Thr Cys Ser Ala Thr Ala Arg Pro Ala Pro
1          5          10          15
Met Val Phe Trp Lys Val Pro Arg Ser Gly Ile Glu Asn Ser Thr Val
          20          25          30
Thr Leu Ser His Pro Asn Gly Thr Thr Ser Val Thr Ser Ile Leu His
          35          40          45
Ile Lys Asp Pro Lys Asn Gln Val Gly Lys Glu Val Ile Cys Gln Val
          50          55          60

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<210> 67
<211> 21
<212> PRT
<213> Homo sapiens

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<400> 67
Leu Gln Gly Ala Ile Phe Val Leu Leu Pro His Leu Gly Pro Ile Leu
1          5          10          15
Val Trp Leu Phe Thr
          20

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<210> 68
<211> 21
<212> PRT
<213> Homo sapiens

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```

<400> 68
Val Leu Leu Leu Val Gln Thr Ala Ile Tyr Ser Val Val Gly Tyr Ala
1          5          10          15
Ser Tyr Leu Val Trp
          20

```

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<210> 69
<211> 21
<212> PRT
<213> Homo sapiens

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<400> 69
Gly Leu Tyr Ala Asp Gln Leu Thr Ile Ser Trp Thr Val Leu Val Leu

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1 5 10 15
 Phe Phe Thr Val His
 20

<210> 70
 <211> 21
 <212> PRT
 <213> Homo sapiens

<400> 70
 Gly Leu Ala Leu Leu His Leu Leu Leu Leu Tyr Gly Leu Val Val Ser
 1 5 10 15
 Thr Ala Leu Ile Trp
 20

<210> 71
 <211> 21
 <212> PRT
 <213> Homo sapiens

<400> 71
 Leu Ala Ala Leu Leu Leu Leu Pro Tyr Leu Ala Trp Leu Thr Val Thr
 1 5 10 15
 Ser Ala Leu Thr Tyr
 20

<210> 72
 <211> 11
 <212> PRT
 <213> Homo sapiens

<400> 72
 Val Thr Ser Ala Leu Thr Tyr His Leu Trp Arg
 1 5 10

<210> 73
 <211> 21
 <212> PRT
 <213> Homo sapiens

<400> 73
 Leu Tyr Ala Val Gln Leu Thr Ile Ser Trp Thr Val Leu Val Leu Phe
 1 5 10 15
 Phe Thr Val His Asn
 20

<210> 74
 <211> 21
 <212> PRT
 <213> Homo sapiens

<400> 74
 Leu Ala Leu Leu His Leu Leu Leu Leu Tyr Gly Leu Val Val Ser Thr
 1 5 10 15
 Ala Leu Ile Trp His

20

<210> 75
 <211> 99
 <212> PRT
 <213> Homo sapiens

<400> 75
 Leu Leu His Asn His Leu Thr Val Arg Val Ile Glu Ala Arg Asp Leu
 1 5 10 15
 Pro Pro Pro Ile Ser His Asp Gly Ser Arg Gln Asp Met Ala His Ser
 20 25 30
 Asn Pro Tyr Val Lys Ile Cys Leu Leu Pro Asp Gln Lys Asn Ser Lys
 35 40 45
 Gln Thr Gly Val Lys Arg Lys Thr Gln Lys Pro Val Phe Glu Glu Arg
 50 55 60
 Tyr Thr Phe Glu Ile Pro Phe Leu Glu Ala Gln Arg Arg Thr Leu Leu
 65 70 75 80
 Leu Thr Val Val Asp Phe Asp Lys Phe Ser Arg His Cys Val Ile Gly
 85 90 95
 Lys Val Ser

<210> 76
 <211> 93
 <212> PRT
 <213> Homo sapiens

<400> 76
 Gly Arg Leu Asn Val Asp Val Ile Arg Ala Lys Gln Leu Leu Gln Thr
 1 5 10 15
 Asp Val Ser Gln Gly Ser Asp Pro Phe Val Lys Ile Gln Leu Val His
 20 25 30
 Gly Leu Lys Leu Val Lys Thr Lys Lys Thr Ser Phe Leu Arg Gly Thr
 35 40 45
 Ile Asp Pro Phe Tyr Asn Glu Ser Phe Ser Phe Lys Val Pro Gln Glu
 50 55 60
 Glu Leu Glu Asn Ala Ser Leu Val Phe Thr Val Phe Gly His Asn Met
 65 70 75 80
 Lys Ser Ser Asn Asp Phe Ile Gly Arg Ile Val Ile Gly
 85 90

<210> 77
 <211> 64
 <212> PRT
 <213> Homo sapiens

<400> 77
 Ala Gln Glu Pro Thr Gly Asn Asn Ala Glu Ile Cys Leu Leu Pro Leu
 1 5 10 15
 Asp Tyr Gly Pro Cys Arg Ala Leu Leu Leu Arg Tyr Tyr Tyr Asp Arg
 20 25 30
 Tyr Thr Gln Ser Cys Arg Gln Phe Leu Tyr Gly Gly Cys Glu Gly Asn
 35 40 45
 Ala Asn Asn Phe Tyr Thr Trp Glu Ala Cys Asp Asp Leu Ala Gly Gly
 50 55 60

<210> 78
 <211> 24
 <212> PRT
 <213> Homo sapiens

<400> 78
 Met Asp Pro Ala Arg Pro Leu Gly Leu Ser Ile Leu Leu Leu Phe Leu
 1 5 10 15
 Thr Glu Ala Ala Leu Gly Asp Ala
 20

<210> 79
 <211> 51
 <212> PRT
 <213> Homo sapiens

<400> 79
 Cys Leu Leu Pro Leu Asp Tyr Gly Pro Cys Arg Ala Leu Leu Leu Arg
 1 5 10 15
 Tyr Tyr Tyr Asp Arg Tyr Thr Gln Ser Cys Arg Gln Phe Leu Tyr Gly
 20 25 30
 Gly Cys Glu Gly Asn Ala Asn Asn Phe Tyr Thr Trp Glu Ala Cys Asp
 35 40 45
 Asp Leu Ala
 50

<210> 80
 <211> 248
 <212> PRT
 <213> Homo sapiens

<400> 80
 Met Ala Ala Val Leu Thr Trp Ala Leu Ala Leu Leu Ser Ala Phe Ser
 1 5 10 15
 Ala Thr Gln Ala Arg Lys Gly Phe Trp Asp Tyr Phe Ser Gln Thr Ser
 20 25 30
 Gly Asp Lys Gly Arg Val Glu Gln Ile His Gln Gln Lys Met Ala Arg
 35 40 45
 Glu Pro Ala Thr Leu Lys Asp Ser Leu Glu Gln Asp Leu Asn Asn Met
 50 55 60
 Asn Lys Phe Leu Glu Lys Leu Arg Pro Leu Ser Gly Ser Glu Ala Pro
 65 70 75 80
 Arg Leu Pro Gln Asp Pro Val Gly Met Arg Arg Gln Leu Gln Glu Glu
 85 90 95
 Leu Glu Glu Val Lys Ala Arg Leu Gln Pro Tyr Met Ala Glu Ala His
 100 105 110
 Glu Leu Val Gly Trp Asn Leu Glu Gly Leu Arg Gln Gln Leu Lys Pro
 115 120 125
 Tyr Thr Met Asp Leu Met Glu Gln Val Ala Leu Arg Val Gln Glu Leu
 130 135 140
 Gln Glu Gln Leu Arg Val Val Gly Glu Asp Thr Lys Ala Gln Leu Leu
 145 150 155 160
 Gly Gly Val Asp Glu Ala Trp Ala Leu Leu Gln Gly Leu Gln Ser Arg
 165 170 175
 Val Val His His Thr Gly Arg Phe Lys Glu Leu Phe His Pro Tyr Ala

			180					185					190				
Glu	Ser	Leu	Val	Ser	Gly	Ile	Gly	Arg	His	Val	Gln	Glu	Leu	His	Arg		
			195				200					205					
Ser	Val	Ala	Pro	His	Ala	Pro	Ala	Ser	Pro	Ala	Arg	Leu	Ser	Arg	Cys		
	210					215					220						
Val	Gln	Val	Leu	Ser	Arg	Lys	Leu	Thr	Leu	Lys	Ala	Lys	Ala	Leu	His		
225					230					235					240		
Ala	Arg	Ile	Gln	Gln	Asn	Leu	Asp										
			245														

<210> 81
 <211> 107
 <212> PRT
 <213> Homo sapiens

<400>	81																
Phe	Lys	Thr	Leu	Gln	Arg	Asn	Gly	Leu	Met	Leu	His	Thr	Gly	Lys	Ser		
1			5					10						15			
Ala	Asp	Tyr	Val	Asn	Leu	Ala	Leu	Lys	Asn	Gly	Ala	Val	Ser	Leu	Val		
			20					25					30				
Ile	Asn	Leu	Gly	Ser	Gly	Ala	Phe	Glu	Ala	Leu	Val	Glu	Pro	Val	Asn		
			35				40					45					
Gly	Lys	Phe	Asn	Asp	Asn	Ala	Trp	His	Asp	Val	Lys	Val	Thr	Arg	Asn		
	50					55					60						
Leu	Arg	Gln	Val	Thr	Ile	Ser	Val	Asp	Gly	Ile	Leu	Thr	Thr	Thr	Gly		
65					70					75					80		
Tyr	Thr	Gln	Glu	Asp	Tyr	Thr	Met	Leu	Gly	Ser	Asp	Asp	Phe	Phe	Tyr		
				85					90					95			
Val	Gly	Gly	Ser	Pro	Ser	Thr	Ala	Asp	Leu	Pro							
			100					105									

<210> 82
 <211> 35
 <212> PRT
 <213> Homo sapiens

<400>	82																
Val	Met	Ser	Phe	Arg	Val	Ser	Asp	Leu	Gln	Met	Leu	Leu	Gly	Phe	Val		
1			5					10						15			
Gly	Arg	Ser	Lys	Ser	Gly	Leu	Lys	His	Glu	Leu	Val	Thr	Arg	Ala	Leu		
			20					25					30				
Gln	Leu	Val															
			35														

<210> 83
 <211> 58
 <212> PRT
 <213> Homo sapiens

<400>	83																
Val	Ser	Leu	Ile	Cys	Pro	Leu	Val	Lys	Met	Arg	Leu	Ser	Val	Pro	Cys		
1			5					10						15			
Arg	Ala	Glu	Thr	Cys	Ala	His	Leu	Gln	Cys	Phe	Asp	Ala	Val	Phe	Tyr		
			20					25					30				
Leu	Gln	Met	Asn	Glu	Lys	Glu	Thr	Cys	Ala	His	Leu	Gln	Cys	Phe	Asp		

35 40 45
 Ala Val Phe Tyr Leu Gln Met Asn Glu Lys
 50 55

<210> 84
 <211> 18
 <212> PRT
 <213> Homo sapiens

<400> 84
 Met Leu Leu Leu Ser Leu Thr Leu Ser Leu Val Leu Leu Gly Ser Ser
 1 5 10 15
 Trp Gly

<210> 85
 <211> 10
 <212> PRT
 <213> Homo sapiens

<400> 85
 Ser Leu Gln Asp Ser Ser Asp Phe His Phe
 1 5 10

<210> 86
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 86
 Met Ile Pro Thr Phe Thr Ala Leu Leu Cys Leu Gly Leu Ser Leu Gly
 1 5 10 15
 Pro Arg Thr His Met Gln Ala
 20

<210> 87
 <211> 21
 <212> PRT
 <213> Homo sapiens

<400> 87
 Val Leu Ile Gly Val Leu Val Val Ser Ile Leu Leu Leu Ser Leu Leu
 1 5 10 15
 Leu Phe Leu Leu Leu
 20

<210> 88
 <211> 424
 <212> PRT
 <213> Homo sapiens

<400> 88
 Gly Pro Leu Pro Lys Pro Thr Leu Trp Ala Glu Pro Gly Ser Val Ile
 1 5 10 15
 Ser Trp Gly Asn Ser Val Thr Ile Trp Cys Gln Gly Thr Leu Glu Ala
 20 25 30

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Arg Glu Tyr Arg Leu Asp Lys Glu Glu Ser Pro Ala Pro Trp Asp Arg
      35              40              45
Gln Asn Pro Leu Glu Pro Lys Asn Lys Ala Arg Phe Ser Ile Pro Ser
      50              55              60
Met Thr Glu Asp Tyr Ala Gly Arg Tyr Arg Cys Tyr Tyr Arg Ser Pro
65              70              75              80
Val Gly Trp Ser Gln Pro Ser Asp Pro Leu Glu Leu Val Met Thr Gly
      85              90              95
Ala Tyr Ser Lys Pro Thr Leu Ser Ala Leu Pro Ser Pro Leu Val Thr
      100             105             110
Ser Glu Lys Ser Val Thr Leu Leu Cys Gln Ser Arg Ser Pro Met Asp
      115             120             125
Thr Phe Leu Leu Ile Lys Glu Arg Ala Ala His Pro Leu Leu His Leu
      130             135             140
Arg Ser Glu His Gly Ala Gln Gln His Gln Ala Glu Phe Pro Met Ser
145             150             155             160
Pro Val Thr Ser Val His Gly Gly Thr Tyr Arg Cys Phe Ser Ser His
      165             170             175
Gly Phe Ser His Tyr Leu Leu Ser His Pro Ser Asp Pro Leu Glu Leu
      180             185             190
Ile Val Ser Gly Ser Leu Glu Asp Pro Arg Pro Ser Pro Thr Arg Ser
      195             200             205
Val Ser Thr Ala Ala Gly Pro Glu Asp Gln Pro Leu Met Pro Thr Gly
      210             215             220
Ser Val Pro His Ser Gly Leu Arg Arg His Trp Glu Val Leu Ile Gly
225             230             235             240
Val Leu Val Val Ser Ile Leu Leu Leu Ser Leu Leu Leu Phe Leu Leu
      245             250             255
Leu Gln His Trp Arg Gln Gly Lys His Arg Thr Leu Ala Gln Arg Gln
      260             265             270
Ala Asp Phe Gln Arg Pro Pro Gly Ala Ala Glu Pro Glu Pro Lys Asp
      275             280             285
Gly Gly Leu Gln Arg Arg Ser Ser Pro Ala Ala Asp Val Gln Gly Glu
      290             295             300
Asn Phe Cys Ala Ala Val Lys Asp Thr Gln Pro Glu Asp Gly Val Glu
305             310             315             320
Met Asp Thr Arg Ser Pro His Asp Glu Asp Pro Gln Ala Val Thr Tyr
      325             330             335
Ala Lys Val Lys His Ser Arg Pro Arg Arg Glu Met Ala Ser Pro Pro
      340             345             350
Ser Pro Leu Ser Gly Glu Phe Leu Asp Thr Lys Asp Arg Gln Ala Glu
      355             360             365
Glu Asp Arg Gln Met Asp Thr Glu Ala Ala Ala Ser Glu Ala Pro Gln
      370             375             380
Asp Val Thr Tyr Ala Gln Leu His Ser Phe Thr Leu Arg Gln Lys Ala
385             390             395             400
Thr Glu Pro Pro Pro Ser Gln Glu Gly Ala Ser Pro Ala Glu Pro Ser
      405             410             415
Val Tyr Ala Thr Leu Ala Ile His
      420

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<210> 89

<211> 236

<212> PRT

<213> Homo sapiens

<400> 89

Gly	Pro	Leu	Pro	Lys	Pro	Thr	Leu	Trp	Ala	Glu	Pro	Gly	Ser	Val	Ile
1				5					10					15	
Ser	Trp	Gly	Asn	Ser	Val	Thr	Ile	Trp	Cys	Gln	Gly	Thr	Leu	Glu	Ala
			20					25					30		
Arg	Glu	Tyr	Arg	Leu	Asp	Lys	Glu	Glu	Ser	Pro	Ala	Pro	Trp	Asp	Arg
		35					40					45			
Gln	Asn	Pro	Leu	Glu	Pro	Lys	Asn	Lys	Ala	Arg	Phe	Ser	Ile	Pro	Ser
	50					55					60				
Met	Thr	Glu	Asp	Tyr	Ala	Gly	Arg	Tyr	Arg	Cys	Tyr	Tyr	Arg	Ser	Pro
65					70					75					80
Val	Gly	Trp	Ser	Gln	Pro	Ser	Asp	Pro	Leu	Glu	Leu	Val	Met	Thr	Gly
				85					90					95	
Ala	Tyr	Ser	Lys	Pro	Thr	Leu	Ser	Ala	Leu	Pro	Ser	Pro	Leu	Val	Thr
			100					105					110		
Ser	Glu	Lys	Ser	Val	Thr	Leu	Leu	Cys	Gln	Ser	Arg	Ser	Pro	Met	Asp
		115					120					125			
Thr	Phe	Leu	Leu	Ile	Lys	Glu	Arg	Ala	Ala	His	Pro	Leu	Leu	His	Leu
	130					135					140				
Arg	Ser	Glu	His	Gly	Ala	Gln	Gln	His	Gln	Ala	Glu	Phe	Pro	Met	Ser
145					150					155					160
Pro	Val	Thr	Ser	Val	His	Gly	Gly	Thr	Tyr	Arg	Cys	Phe	Ser	Ser	His
				165					170					175	
Gly	Phe	Ser	His	Tyr	Leu	Leu	Ser	His	Pro	Ser	Asp	Pro	Leu	Glu	Leu
			180					185					190		
Ile	Val	Ser	Gly	Ser	Leu	Glu	Asp	Pro	Arg	Pro	Ser	Pro	Thr	Arg	Ser
		195					200					205			
Val	Ser	Thr	Ala	Ala	Gly	Pro	Glu	Asp	Gln	Pro	Leu	Met	Pro	Thr	Gly
	210					215					220				
Ser	Val	Pro	His	Ser	Gly	Leu	Arg	Arg	His	Trp	Glu				
225					230					235					

<210> 90

<211> 167

<212> PRT

<213> Homo sapiens

<400> 90

Gln	His	Trp	Arg	Gln	Gly	Lys	His	Arg	Thr	Leu	Ala	Gln	Arg	Gln	Ala
1				5					10					15	
Asp	Phe	Gln	Arg	Pro	Pro	Gly	Ala	Ala	Glu	Pro	Glu	Pro	Lys	Asp	Gly
			20					25					30		
Gly	Leu	Gln	Arg	Arg	Ser	Ser	Pro	Ala	Ala	Asp	Val	Gln	Gly	Glu	Asn
		35					40					45			
Phe	Cys	Ala	Ala	Val	Lys	Asp	Thr	Gln	Pro	Glu	Asp	Gly	Val	Glu	Met
	50					55					60				
Asp	Thr	Arg	Ser	Pro	His	Asp	Glu	Asp	Pro	Gln	Ala	Val	Thr	Tyr	Ala
65					70					75					80
Lys	Val	Lys	His	Ser	Arg	Pro	Arg	Arg	Glu	Met	Ala	Ser	Pro	Pro	Ser
				85					90					95	
Pro	Leu	Ser	Gly	Glu	Phe	Leu	Asp	Thr	Lys	Asp	Arg	Gln	Ala	Glu	Glu
			100					105					110		
Asp	Arg	Gln	Met	Asp	Thr	Glu	Ala	Ala	Ala	Ser	Glu	Ala	Pro	Gln	Asp
		115					120					125			

Val Thr Tyr Ala Gln Leu His Ser Phe Thr Leu Arg Gln Lys Ala Thr
 130 135 140
 Glu Pro Pro Pro Ser Gln Glu Gly Ala Ser Pro Ala Glu Pro Ser Val
 145 150 155 160
 Tyr Ala Thr Leu Ala Ile His
 165

<210> 91
 <211> 22
 <212> PRT
 <213> Homo sapiens

<400> 91
 Met Arg Thr Tyr Trp Leu His Ser Val Trp Val Leu Gly Phe Phe Leu
 1 5 10 15
 Ser Leu Phe Ser Leu Gln
 20

<210> 92
 <211> 361
 <212> PRT
 <213> Homo sapiens

<400> 92
 Gly Leu Pro Val Arg Ser Val Asp Phe Asn Arg Gly Thr Asp Asn Ile
 1 5 10 15
 Thr Val Arg Gln Gly Asp Thr Ala Ile Leu Arg Cys Val Val Glu Asp
 20 25 30
 Lys Asn Ser Lys Val Ala Trp Leu Asn Arg Ser Gly Ile Ile Phe Ala
 35 40 45
 Gly His Asp Lys Trp Ser Leu Asp Pro Arg Val Glu Leu Glu Lys Arg
 50 55 60
 His Ser Leu Glu Tyr Ser Leu Arg Ile Gln Lys Val Asp Val Tyr Asp
 65 70 75 80
 Glu Gly Ser Tyr Thr Cys Ser Val Gln Thr Gln His Glu Pro Lys Thr
 85 90 95
 Ser Gln Val Tyr Leu Ile Val Gln Val Pro Pro Lys Ile Ser Asn Ile
 100 105 110
 Ser Ser Asp Val Thr Val Asn Glu Gly Ser Asn Val Thr Leu Val Cys
 115 120 125
 Met Ala Asn Gly Arg Pro Glu Pro Val Ile Thr Trp Arg His Leu Thr
 130 135 140
 Pro Thr Gly Arg Glu Phe Glu Gly Glu Glu Glu Tyr Leu Glu Ile Leu
 145 150 155 160
 Gly Ile Thr Arg Glu Gln Ser Gly Lys Tyr Glu Cys Lys Ala Ala Asn
 165 170 175
 Glu Val Ser Ser Ala Asp Val Lys Gln Val Lys Val Thr Val Asn Tyr
 180 185 190
 Pro Pro Thr Ile Thr Glu Ser Lys Ser Asn Glu Ala Thr Thr Gly Arg
 195 200 205
 Gln Ala Ser Leu Lys Cys Glu Ala Ser Ala Val Pro Ala Pro Asp Phe
 210 215 220
 Glu Trp Tyr Arg Asp Asp Thr Arg Ile Asn Ser Ala Asn Gly Leu Glu
 225 230 235 240
 Ile Lys Ser Thr Glu Gly Gln Ser Ser Leu Thr Val Thr Asn Val Thr

				245					250					255		
Glu	Glu	His	Tyr	Gly	Asn	Tyr	Thr	Cys	Val	Ala	Ala	Asn	Lys	Leu	Gly	
			260					265					270			
Val	Thr	Asn	Ala	Ser	Leu	Val	Leu	Phe	Lys	Arg	Val	Leu	Pro	Thr	Ile	
		275					280					285				
Pro	His	Pro	Ile	Gln	Glu	Ile	Gly	Thr	Thr	Val	His	Phe	Lys	Gln	Lys	
	290					295					300					
Gly	Ile	Phe	Leu	Ser	Glu	Ser	Gln	Arg	Gly	Glu	Thr	Thr	Lys	Ile	Thr	
305					310					315					320	
Leu	Asn	Cys	Gly	Asn	Leu	Phe	Leu	Arg	Asn	Leu	His	Pro	Thr	Ser	Asp	
			325					330						335		
Gln	Glu	Pro	Gln	Arg	Leu	Trp	Thr	Leu	Cys	Cys	Leu	Leu	Pro	Arg	Lys	
			340					345					350			
Gly	Gln	His	Arg	Ile	Tyr	Gly	Gln	Cys								
		355					360									

<210> 93
 <211> 281
 <212> PRT
 <213> Homo sapiens

<400> 93

Gly	Leu	Pro	Val	Arg	Ser	Val	Asp	Phe	Asn	Arg	Gly	Thr	Asp	Asn	Ile	
1			5					10						15		
Thr	Val	Arg	Gln	Gly	Asp	Thr	Ala	Ile	Leu	Arg	Cys	Val	Val	Glu	Asp	
			20				25						30			
Lys	Asn	Ser	Lys	Val	Ala	Trp	Leu	Asn	Arg	Ser	Gly	Ile	Ile	Phe	Ala	
		35				40					45					
Gly	His	Asp	Lys	Trp	Ser	Leu	Asp	Pro	Arg	Val	Glu	Leu	Glu	Lys	Arg	
	50				55					60						
His	Ser	Leu	Glu	Tyr	Ser	Leu	Arg	Ile	Gln	Lys	Val	Asp	Val	Tyr	Asp	
65					70				75						80	
Glu	Gly	Ser	Tyr	Thr	Cys	Ser	Val	Gln	Thr	Gln	His	Glu	Pro	Lys	Thr	
			85					90						95		
Ser	Gln	Val	Tyr	Leu	Ile	Val	Gln	Val	Pro	Pro	Lys	Ile	Ser	Asn	Ile	
		100					105						110			
Ser	Ser	Asp	Val	Thr	Val	Asn	Glu	Gly	Ser	Asn	Val	Thr	Leu	Val	Cys	
		115				120						125				
Met	Ala	Asn	Gly	Arg	Pro	Glu	Pro	Val	Ile	Thr	Trp	Arg	His	Leu	Thr	
	130				135						140					
Pro	Thr	Gly	Arg	Glu	Phe	Glu	Gly	Glu	Glu	Glu	Tyr	Leu	Glu	Ile	Leu	
145				150				155						160		
Gly	Ile	Thr	Arg	Glu	Gln	Ser	Gly	Lys	Tyr	Glu	Cys	Lys	Ala	Ala	Asn	
			165					170						175		
Glu	Val	Ser	Ser	Ala	Asp	Val	Lys	Gln	Val	Lys	Val	Thr	Val	Asn	Tyr	
		180				185						190				
Pro	Pro	Thr	Ile	Thr	Glu	Ser	Lys	Ser	Asn	Glu	Ala	Thr	Thr	Gly	Arg	
		195				200						205				
Gln	Ala	Ser	Leu	Lys	Cys	Glu	Ala	Ser	Ala	Val	Pro	Ala	Pro	Asp	Phe	
	210				215					220						
Glu	Trp	Tyr	Arg	Asp	Asp	Thr	Arg	Ile	Asn	Ser	Ala	Asn	Gly	Leu	Glu	
225				230					235					240		
Ile	Lys	Ser	Thr	Glu	Gly	Gln	Ser	Ser	Leu	Thr	Val	Thr	Asn	Val	Thr	
			245					250					255			
Glu	Glu	His	Tyr	Gly	Asn	Tyr	Thr	Cys	Val	Ala	Ala	Asn	Lys	Leu	Gly	

		260						265						270
Val	Thr	Asn	Ala	Ser	Leu	Val	Leu	Phe						
		275					280							

<210> 94
 <211> 80
 <212> PRT
 <213> Homo sapiens

<400> 94
 Lys Arg Val Leu Pro Thr Ile Pro His Pro Ile Gln Glu Ile Gly Thr
 1 5 10 15
 Thr Val His Phe Lys Gln Lys Gly Ile Phe Leu Ser Glu Ser Gln Arg
 20 25 30
 Gly Glu Thr Thr Lys Ile Thr Leu Asn Cys Gly Asn Leu Phe Leu Arg
 35 40 45
 Asn Leu His Pro Thr Ser Asp Gln Glu Pro Gln Arg Leu Trp Thr Leu
 50 55 60
 Cys Cys Leu Leu Pro Arg Lys Gly Gln His Arg Ile Tyr Gly Gln Cys
 65 70 75 80

<210> 95
 <211> 72
 <212> PRT
 <213> Homo sapiens

<400> 95
 Asp Gly Gly Phe Cys Glu Val Cys Lys Lys Leu Val Gly Tyr Leu Asp
 1 5 10 15
 Arg Asn Leu Glu Lys Asn Ser Thr Lys Gln Glu Ile Leu Ala Ala Leu
 20 25 30
 Glu Lys Gly Cys Ser Phe Leu Pro Asp Pro Tyr Gln Lys Gln Cys Asp
 35 40 45
 Gln Phe Val Ala Glu Tyr Glu Pro Val Leu Ile Glu Ile Leu Val Glu
 50 55 60
 Val Trp Ile Leu Pro Ser Cys Ala
 65 70

<210> 96
 <211> 142
 <212> PRT
 <213> Homo sapiens

<400> 96
 Met Glu Leu Cys Arg Ser Leu Ala Leu Leu Gly Gly Ser Leu Gly Leu
 1 5 10 15
 Met Phe Cys Leu Ile Ala Leu Ser Thr Asp Phe Trp Phe Glu Ala Val
 20 25 30
 Gly Pro Thr His Ser Ala His Ser Gly Leu Trp Pro Thr Gly His Gly
 35 40 45
 Asp Ile Ile Ser Gly His Gly Pro Leu Val Ser Thr Thr Ala Ala Phe
 50 55 60
 Ala Ala Gly Lys Asp Ser Gly Leu Asp Trp Gly Ile Ala Ser Gln Arg
 65 70 75 80
 Ile Pro Ala Glu Glu Leu Ser His Leu Ser Cys Pro Cys Pro Gln Pro

				85					90					95			
Ser	Pro	Trp	Trp	Trp	Pro	Trp	Arg	Cys	Thr	Pro	Ala	Ser	Gly	Gly	Thr		
			100					105					110				
Ser	Leu	His	Thr	Pro	Arg	Ser	Arg	Pro	Ser	Ser	Pro	Gly	Pro	Ser	Thr		
		115					120					125					
Trp	Ala	Gly	Ser	Gln	Leu	Ser	Ser	Cys	Ser	Val	Gln	Val	Pro				
	130					135						140					

<210> 97
 <211> 105
 <212> PRT
 <213> Homo sapiens

<400> 97

Ala	His	Ser	Gly	Leu	Trp	Pro	Thr	Gly	His	Gly	Asp	Ile	Ile	Ser	Gly		
1				5				10						15			
His	Gly	Pro	Leu	Val	Ser	Thr	Thr	Ala	Ala	Phe	Ala	Ala	Gly	Lys	Asp		
			20					25					30				
Ser	Gly	Leu	Asp	Trp	Gly	Ile	Ala	Ser	Gln	Arg	Ile	Pro	Ala	Glu	Glu		
		35					40					45					
Leu	Ser	His	Leu	Ser	Cys	Pro	Cys	Pro	Gln	Pro	Ser	Pro	Trp	Trp	Trp		
	50					55					60						
Pro	Trp	Arg	Cys	Thr	Pro	Ala	Ser	Gly	Gly	Thr	Ser	Leu	His	Thr	Pro		
65					70					75					80		
Arg	Ser	Arg	Pro	Ser	Ser	Pro	Gly	Pro	Ser	Thr	Trp	Ala	Gly	Ser	Gln		
				85					90					95			
Leu	Ser	Ser	Cys	Ser	Val	Gln	Val	Pro									
			100					105									

<210> 98
 <211> 37
 <212> PRT
 <213> Homo sapiens

<400> 98

Met	Glu	Leu	Cys	Arg	Ser	Leu	Ala	Leu	Leu	Gly	Gly	Ser	Leu	Gly	Leu		
1				5				10						15			
Met	Phe	Cys	Leu	Ile	Ala	Leu	Ser	Thr	Asp	Phe	Trp	Phe	Glu	Ala	Val		
			20					25					30				
Gly	Pro	Thr	His	Ser													
			35														

<210> 99
 <211> 21
 <212> PRT
 <213> Homo sapiens

<400> 99

Gly	Asp	Ile	Ile	Ser	Gly	His	Gly	Pro	Leu	Val	Ser	Thr	Thr	Ala	Ala		
1				5				10						15			
Phe	Ala	Ala	Gly	Lys													
			20														

<210> 100
 <211> 50

<212> PRT
 <213> Homo sapiens

<400> 100
 Ser Cys Pro Cys Pro Gln Pro Ser Pro Trp Trp Trp Pro Trp Arg Cys
 1 5 10 15
 Thr Pro Ala Ser Gly Gly Thr Ser Leu His Thr Pro Arg Ser Arg Pro
 20 25 30
 Ser Ser Pro Gly Pro Ser Thr Trp Ala Gly Ser Gln Leu Ser Ser Cys
 35 40 45
 Ser Val
 50

<210> 101
 <211> 8
 <212> PRT
 <213> Homo sapiens

<400> 101
 Ala Gly Lys Asp Ser Gly Leu Asp
 1 5

<210> 102
 <211> 21
 <212> PRT
 <213> Homo sapiens

<400> 102
 Phe Asn Leu Phe Phe Phe Val Leu Gly Ser Leu Ile Phe Cys Phe Gly
 1 5 10 15
 Ile Trp Ile Leu Ile
 20

<210> 103
 <211> 21
 <212> PRT
 <213> Homo sapiens

<400> 103
 Val Leu Ala Ile Ser Gly Ile Phe Thr Met Gly Ile Ala Leu Leu Gly
 1 5 10 15
 Cys Val Gly Ala Leu
 20

<210> 104
 <211> 21
 <212> PRT
 <213> Homo sapiens

<400> 104
 Leu Tyr Phe Gly Met Leu Leu Leu Leu Phe Ala Thr Gln Ile Thr Leu
 1 5 10 15
 Gly Ile Leu Ile Ser
 20

<210> 105
 <211> 110
 <212> PRT
 <213> Homo sapiens

<400> 105
 Ala Ser Asp Val Leu Glu Leu Thr Asp Asp Asn Phe Glu Ser Arg Ile
 1 5 10 15
 Ser Asp Thr Gly Ser Ala Gly Leu Met Leu Val Glu Phe Phe Ala Pro
 20 25 30
 Trp Cys Gly His Cys Lys Arg Leu Ala Pro Glu Tyr Glu Ala Ala Ala
 35 40 45
 Thr Arg Leu Lys Gly Ile Val Pro Leu Ala Lys Val Asp Cys Thr Ala
 50 55 60
 Asn Thr Asn Thr Cys Asn Lys Tyr Gly Val Ser Gly Tyr Pro Thr Leu
 65 70 75 80
 Lys Ile Phe Arg Asp Gly Glu Glu Ala Gly Ala Tyr Asp Gly Pro Arg
 85 90 95
 Thr Ala Asp Gly Ile Val Ser His Leu Lys Lys Gln Ala Gly
 100 105 110

<210> 106
 <211> 111
 <212> PRT
 <213> Homo sapiens

<400> 106
 Asp Gly Pro Val Lys Val Val Val Ala Glu Asn Phe Asp Glu Ile Val
 1 5 10 15
 Asn Asn Glu Asn Lys Asp Val Leu Ile Glu Phe Tyr Ala Pro Trp Cys
 20 25 30
 Gly His Cys Lys Asn Leu Glu Pro Lys Tyr Lys Glu Leu Gly Glu Lys
 35 40 45
 Leu Ser Lys Asp Pro Asn Ile Val Ile Ala Lys Met Asp Ala Thr Ala
 50 55 60
 Asn Asp Val Pro Ser Pro Tyr Glu Val Arg Gly Phe Pro Thr Ile Tyr
 65 70 75 80
 Phe Ser Pro Ala Asn Lys Lys Leu Asn Pro Lys Lys Tyr Glu Gly Gly
 85 90 95
 Arg Glu Leu Ser Asp Phe Ile Ser Tyr Leu Gln Arg Glu Ala Thr
 100 105 110

<210> 107
 <211> 21
 <212> PRT
 <213> Homo sapiens

<400> 107
 Ser Asp Thr Gly Ser Ala Gly Leu Met Leu Val Glu Phe Phe Ala Pro
 1 5 10 15
 Trp Cys Gly His Cys
 20

<210> 108
 <211> 160

<212> PRT

<213> Homo sapiens

<400> 108

Ile	Gly	Glu	Ile	Ala	Ala	Ala	Val	Ser	Phe	Ile	Ser	Lys	Phe	Leu	Arg
1				5					10					15	
Thr	Lys	Gly	Leu	Thr	Ser	Glu	Arg	Gln	Leu	Gln	Thr	Phe	Ser	Gln	Ser
			20					25					30		
Leu	Gln	Glu	Leu	Leu	Ala	Glu	His	Tyr	Lys	His	His	Trp	Phe	Pro	Glu
		35					40					45			
Lys	Pro	Cys	Lys	Gly	Ser	Gly	Tyr	Arg	Cys	Ile	Arg	Ile	Asn	His	Lys
	50					55					60				
Met	Asp	Pro	Leu	Ile	Gly	Gln	Ala	Ala	Gln	Arg	Ile	Gly	Leu	Ser	Ser
65					70					75					80
Gln	Glu	Leu	Phe	Arg	Leu	Leu	Pro	Ser	Glu	Leu	Thr	Leu	Trp	Val	Asp
				85					90					95	
Pro	Tyr	Glu	Val	Ser	Tyr	Arg	Ile	Gly	Glu	Asp	Gly	Ser	Ile	Cys	Val
			100					105					110		
Leu	Tyr	Glu	Ala	Ser	Pro	Ala	Gly	Gly	Ser	Thr	Gln	Asn	Ser	Thr	Asn
		115					120					125			
Val	Gln	Met	Val	Asp	Ser	Arg	Ile	Ser	Cys	Lys	Glu	Glu	Leu	Leu	Leu
	130					135					140				
Gly	Arg	Thr	Ser	Pro	Ser	Lys	Asn	Tyr	Asn	Met	Met	Thr	Val	Ser	Ser
145					150					155					160

<210> 109

<211> 4

<212> PRT

<213> Homo sapiens

<400> 109

Val Thr Gly Gly

1

<210> 110

<211> 4

<212> PRT

<213> Homo sapiens

<400> 110

Thr Gly Gly Phe

1

<210> 111

<211> 4

<212> PRT

<213> Homo sapiens

<400> 111

Gly Gly Phe Ser

1

<210> 112

<211> 6

<212> PRT

<213> Homo sapiens

<400> 112

Val Thr Gly Gly Phe Ser
1 5

<210> 113

<211> 4

<212> PRT

<213> Homo sapiens

<400> 113

Met Pro Leu Pro
1

<210> 114

<211> 4

<212> PRT

<213> Homo sapiens

<400> 114

Pro Leu Pro Leu
1

<210> 115

<211> 4

<212> PRT

<213> Homo sapiens

<400> 115

Pro Leu Pro Ser
1

<210> 116

<211> 4

<212> PRT

<213> Homo sapiens

<400> 116

Leu Pro Ser Ala
1

<210> 117

<211> 8

<212> PRT

<213> Homo sapiens

<400> 117

Met Pro Leu Pro Leu Pro Ser Ala
1 5

<210> 118

<211> 1161

<212> DNA

<213> Homo sapiens

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<400> 118
ggaaaactat gcctgggggcc gacgctctgc ccggctgctg ccgctgagga aagccgggac 60
gcgagagcccc gccgagagct tctttgctcc ggacgcccct ggacgtggcg ggcagccgcg 120
agggtaacca ccatgatccc ctgggtgctc ctggcctgtg ccctcccctg tgctgctgac 180
ccactgcttg gcgcctttgc tcgcagggac ttccggaaag gctcccctca actggtctgc 240
agcctgcctg gccccaggg cccacccggc ccccaggag ccccagggcc ctcaggaatg 300
atgggacgaa tgggctttcc tggcaaagac ggccaagatg gacacgacgg cgaccggggg 360
gacagcggag aggaaggtcc acctggccgg acaggtaacc ggggaaagcc aggaccaag 420
ggcaaagccg gggccattgg gcgggctggc ccccgaggcc ccaagggggg caacgggtacc 480
cccgggaagc atggcacacc aggcaagaag gggcccaagg gcaagaaagg ggagccaggc 540
ctcccaggcc cctgcagctg tggcagtggc cataccaagt cagctttctc ggtggcagtg 600
accaagagct acccacggga gcggctgccc atcaagtttg acaagattct gatgaacgag 660
ggtggccact acaatgcttc cagcggcaag ttcgtctgcg gcgtgcctgg gatctactac 720
ttcacctacg acatcacgct ggccaacaag cacctggcca tcggcctggg gcacaacggc 780
cagtaccgca tccggacctt tgatgccaac accggcaacc acgatgtggc ctcaggctcc 840
accatcctgg ctctcaagca gggtgacgaa gtttggctgc agatcttcta ctcagagcag 900
aacgggctct tctatgacct ttactggaca gacagcctct ttacgggctt cctaattctat 960
gccgaccagg atgaccccaa cgaggtatag acatgccacg gcggtcctcc aggcagggaa 1020
caagcttctg gacttgggct tacagagcaa gacccacaa ctgtaggctg ggggtggggg 1080
gtcgagttag cggttctagc ctcaggctca cctcctccgc ctcttttttt ccccttcatt 1140
aaatccaaac ctttttatcc a 1161

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<210> 119
<211> 285
<212> PRT
<213> Homo sapiens

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<400> 119
Met Ile Pro Trp Val Leu Leu Ala Cys Ala Leu Pro Cys Ala Ala Asp
1 5 10 15
Pro Leu Leu Gly Ala Phe Ala Arg Arg Asp Phe Arg Lys Gly Ser Pro
20 25 30
Gln Leu Val Cys Ser Leu Pro Gly Pro Gln Gly Pro Pro Gly Pro Pro
35 40 45
Gly Ala Pro Gly Pro Ser Gly Met Met Gly Arg Met Gly Phe Pro Gly
50 55 60
Lys Asp Gly Gln Asp Gly His Asp Gly Asp Arg Gly Asp Ser Gly Glu
65 70 75 80
Glu Gly Pro Pro Gly Arg Thr Gly Asn Arg Gly Lys Pro Gly Pro Lys
85 90 95
Gly Lys Ala Gly Ala Ile Gly Arg Ala Gly Pro Arg Gly Pro Lys Gly
100 105 110
Val Asn Gly Thr Pro Gly Lys His Gly Thr Pro Gly Lys Lys Gly Pro
115 120 125
Lys Gly Lys Lys Gly Glu Pro Gly Leu Pro Gly Pro Cys Ser Cys Gly
130 135 140
Ser Gly His Thr Lys Ser Ala Phe Ser Val Ala Val Thr Lys Ser Tyr
145 150 155 160
Pro Arg Glu Arg Leu Pro Ile Lys Phe Asp Lys Ile Leu Met Asn Glu
165 170 175
Gly Gly His Tyr Asn Ala Ser Ser Gly Lys Phe Val Cys Gly Val Pro
180 185 190
Gly Ile Tyr Tyr Phe Thr Tyr Asp Ile Thr Leu Ala Asn Lys His Leu
195 200 205

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Ala Ile Gly Leu Val His Asn Gly Gln Tyr Arg Ile Arg Thr Phe Asp
 210 215 220
 Ala Asn Thr Gly Asn His Asp Val Ala Ser Gly Ser Thr Ile Leu Ala
 225 230 235 240
 Leu Lys Gln Gly Asp Glu Val Trp Leu Gln Ile Phe Tyr Ser Glu Gln
 245 250 255
 Asn Gly Leu Phe Tyr Asp Pro Tyr Trp Thr Asp Ser Leu Phe Thr Gly
 260 265 270
 Phe Leu Ile Tyr Ala Asp Gln Asp Asp Pro Asn Glu Val
 275 280 285

<210> 120
 <211> 886
 <212> DNA
 <213> Homo sapiens

<400> 120
 gaattcggca cgagggccgc gagggtaacc accatgatcc cctgggtgct cctggcctgt 60
 gccctcccct gtgctgctga cccactgctt ggcgcccttg ctgcgaggga cttccggaaa 120
 ggctcccctc aactggtctg cagcctgcct ggccccaggg gccaccgccg cccccagga 180
 gccccagggc cctcaggaat gatgggacga atgggctttc ctggcaaaga cggccaagat 240
 ggacacgacg gcgaccgggg ggacagcgga gaggaaggtc cacctggccg gacagtgacc 300
 aagagctacc cacgggagcg gctgcccac aagtttgaca agattctgat gaacgagggt 360
 ggccactaca atgcttccag cggcaagttc gtctgcggcg tgcttgggat ctactacttc 420
 acctacgaca tcacgctggc caacaagcac ctggccatcg gcctgggtgca caacggccag 480
 taccgcatcc ggacctttga tgccaacacc ggcaaccacg atgtggcctc aggctccacc 540
 atcctggctc tcaagcaggg tgacgaagtt tggctgcaga tcttctactc agagcagaac 600
 gggctcttct atgaccctta ctggacagac agcctcttta cgggcttcct aatctatgcc 660
 gaccaggatg accccaacga ggtatagaca tgccacggcg gtcctccagg cagggaacaa 720
 gcttctggac ttgggcttac agagcaagac cccacaactg taggctgggg gtgggggggtc 780
 gagtgagcgg ttctagcctc aggctcacct cctctgcctc tttttttccc cttcattaaa 840
 tccaaacctt tttattcaaa aaaaaaaaaa aaaaaagatg cggccg 886

<210> 121
 <211> 217
 <212> PRT
 <213> Homo sapiens

<400> 121
 Met Ile Pro Trp Val Leu Leu Ala Cys Ala Leu Pro Cys Ala Ala Asp
 1 5 10 15
 Pro Leu Leu Gly Ala Phe Ala Arg Arg Asp Phe Arg Lys Gly Ser Pro
 20 25 30
 Gln Leu Val Cys Ser Leu Pro Gly Pro Gln Gly Pro Pro Gly Pro Pro
 35 40 45
 Gly Ala Pro Gly Pro Ser Gly Met Met Gly Arg Met Gly Phe Pro Gly
 50 55 60
 Lys Asp Gly Gln Asp Gly His Asp Gly Asp Arg Gly Asp Ser Gly Glu
 65 70 75 80
 Glu Gly Pro Pro Gly Arg Thr Val Thr Lys Ser Tyr Pro Arg Glu Arg
 85 90 95
 Leu Pro Ile Lys Phe Asp Lys Ile Leu Met Asn Glu Gly Gly His Tyr
 100 105 110
 Asn Ala Ser Ser Gly Lys Phe Val Cys Gly Val Pro Gly Ile Tyr Tyr
 115 120 125

```

Phe Thr Tyr Asp Ile Thr Leu Ala Asn Lys His Leu Ala Ile Gly Leu
 130                      135                      140
Val His Asn Gly Gln Tyr Arg Ile Arg Thr Phe Asp Ala Asn Thr Gly
145                      150                      155                      160
Asn His Asp Val Ala Ser Gly Ser Thr Ile Leu Ala Leu Lys Gln Gly
                      165                      170                      175
Asp Glu Val Trp Leu Gln Ile Phe Tyr Ser Glu Gln Asn Gly Leu Phe
                      180                      185                      190
Tyr Asp Pro Tyr Trp Thr Asp Ser Leu Phe Thr Gly Phe Leu Ile Tyr
                      195                      200                      205
Ala Asp Gln Asp Asp Pro Asn Glu Val
 210                      215

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<210> 122
<211> 15
<212> PRT
<213> Homo sapiens

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<220>
<221> misc_feature
<222> (2)..(3)
<223> Xaa is an unassigned amino acid

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<220>
<221> misc_feature
<222> (6)..(7)
<223> Xaa is an unassigned amino acid

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<220>
<221> misc_feature
<222> (9)..(9)
<223> Xaa is an unassigned amino acid

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<220>
<221> misc_feature
<222> (11)..(11)
<223> Xaa is an unassigned amino acid

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<220>
<221> misc_feature
<222> (14)..(14)
<223> Xaa is an unassigned amino acid

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<400> 122
Arg Xaa Xaa Arg Lys Xaa Xaa Pro Xaa Leu Xaa Cys Ser Xaa Pro
1                      5                      10                      15

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<210> 123
<211> 4
<212> PRT
<213> Homo sapiens

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<400> 123
Ser His His His
1

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<210> 124
<211> 16
<212> PRT
<213> Homo sapiens

<400> 124
Ala Ala Asn Ser Lys Val Ala Phe Ser Ala Val Arg Ser Thr Asn His
1 5 10 15

<210> 125
<211> 12
<212> PRT
<213> Homo sapiens

<400> 125
Ala Ala Asn Ser Lys Val Ala Phe Ser Ala Val Arg
1 5 10

<210> 126
<211> 4
<212> PRT
<213> Homo sapiens

<400> 126
Ser Thr Asn His
1

<210> 127
<211> 16
<212> PRT
<213> Homo sapiens

<400> 127
Ser Gly Ser Ala Lys Val Ala Phe Ser Ala Thr Arg Ser Thr Asn His
1 5 10 15